Naval Education and Training Command

NAVEDTRA 12432
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Training Manual (TRAMAN)

Mineman 1 & C

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Naval Education And Training Program Management Support Activity

MINEMAN 1 & C

NAVEDTRA 12432

1990 Edition Prepared by
MNC Michael B. Brandt

PREFACE

This training manual (TRAMAN) and nonresident training course (NRTC) were written for personnel of the Navy and Naval Reserve who are studying for advancement to the rate of Mineman 1 or C. This TRAMAN and the referenced documents provide technical knowledge and skill requirements necessary to prepare personnel to supervise subordinates in their performance of tasks during the operation, maintenance, and repair of service mines, exercise and training mines, and/or associated equipment.

The TRAMAN is designed for individual study, NOT for classroom instruction, and provides subject matter that relates directly to the occupational standards of the Mineman rating.

The NRTC provides the usual way of satisfying the requirements for completing the course.

The set of assignments in the NRTC includes references pertaining to sections of the TRAMAN and supporting questions.

This TRAMAN and NRTC were prepared by the Naval Education and Training Program Management Support Activity, Pensacola, Florida, for the Chief of Naval Education and Training. Technical assistance was provided by Mobile Mine Assembly Group, Charleston, S.C., and Fleet and Mine Warfare Training Center, Charleston, S.C.. Technical reviews, comments, ideas, and suggestions from the foregoing activities have been most helpful.

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THE UNITED STATES NAVY

GUARDIAN OF OUR COUNTRY

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

WE SERVE WITH HONOR

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

THE FUTURE OF THE NAVY

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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CHAPTER 1

MINE FORCE ORGANIZATION

As a senior Mineman, you should begin to think about how an organization accomplishes its mission and how you can help make it more efficient. Therefore, the relationships between your command and other commands become more important than ever before. You need to understand these command relationships and responsibilities to effectively accomplish your assigned tasks.

This chapter outlines how the Mine Force fits within the larger structure of the U.S. Navy. After thorough study of the chapter, you should be able to discuss in detail the operational and administrative structures within the Navy and the Mine Force and their related functions and responsibilities at each level of command.

U.S. NAVY AND THE MINE FORCE

Within the Department of the Navy there are three organizational components (see fig. 1-1). They are the *Navy Department*, the *Shore Establishment*, and the *Operating Forces*.

NAVY DEPARTMENT

The Navy Department consists of the Office of the Secretary of the Navy, his civilian executive assistants, his staff assistants, the Office of Naval Research, and the Office of the Comptroller of the Navy; the Office of the Chief of Naval Operations; the Headquarters, United States Marine Corps; and under the command of the Chief of Naval Operations, the Headquarters, Naval Material Command, and the Headquarters of the Bureau of Naval Personnel.

THE SHORE ESTABLISHMENT

The Shore Establishment consists of shore activities that supply, maintain, and support the operating forces by furnishing required materials, services, and personnel.

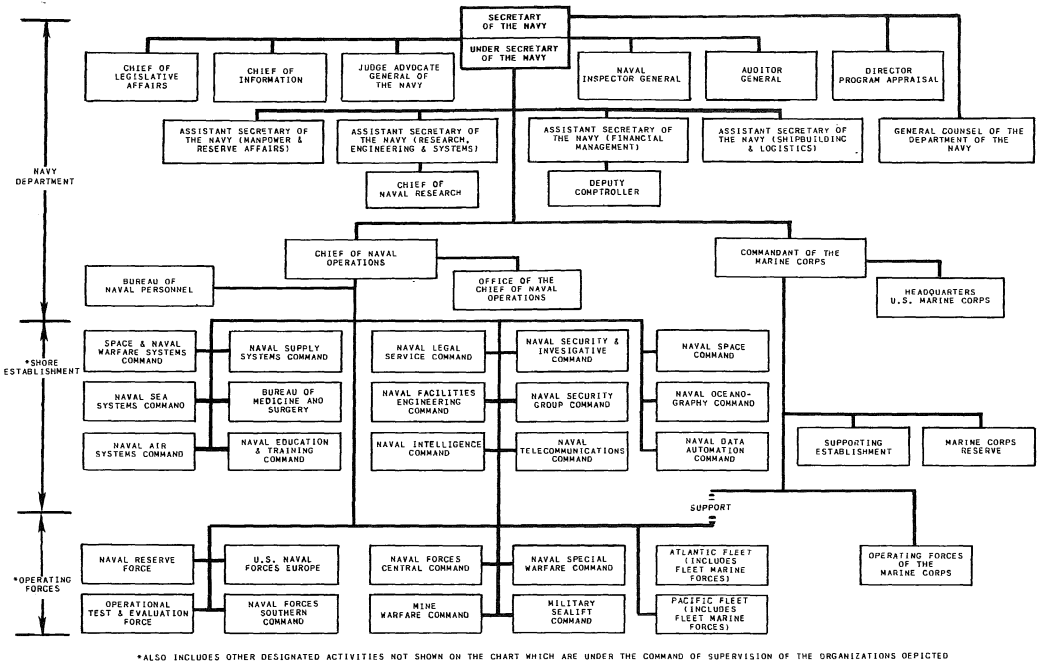
THE OPERATING FORCES

The Operating Forces are composed of combat- or combat-support-oriented forces that are assigned for duty under the commander of a unified or specified command. These components include the following:

- The Atlantic and Pacific fleets, including the forces and commands of the Fleet Marine forces, naval air forces, naval surface forces, submarine forces, and the training commands
- U.S. Naval Forces Europe
- The Mine Warfare Command
- The Military Sealift Command
- The Operational Test and Evaluation Force
- The Naval Reserve Force
- U.S. Naval Forces Central Command
- U.S. Naval Forces Southern Command
- Shore activities of the Department of the Navy assigned to the operating forces

ADMINISTRATIVE ORGANIZATION OF THE DEPARTMENT OF THE NAVY

To carry out the Department of the Navy's responsibilities for providing ready forces that are organized, trained, and equipped to combatant commanders, the operating forces of the Navy are **administratively organized** to develop fleet


SECRETARY OF THE NAVY
UNDER SECRETARY OF THE NAVY
CHIEF OF LEGISLATIVE AFFAIRS
CHIEF OF INFORMATION
JUDGE ADVOCATE GENERAL OF THE NAVY
NAVAL INSPECTOR GENERAL
AUDITOR GENERAL
DIRECTOR PROGRAM APPRAISAL
ASSISTANT SECRETARY OF THE NAVY (MANPOWER & RESERVE AFFAIRS)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH, ENGINEERING & SYSTEMS)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE NAVY (SHIPBUILDING & LOGISTICS)
GENERAL COUNSEL OF THE DEPARTMENT OF THE NAVY
CHIEF OF NAVAL RESEARCH
DEPUTY COMPTROLLER
NAVY DEPARTMENT
CHIEF OF NAVAL OPERATIONS
COMMANDANT OF THE MARINE CORPS
BUREAU OF NAVAL PERSONNEL
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
HEADQUARTERS U.S. MARINE CORPS
SPACE & NAVAL WARFARE SYSTEMS COMMAND
NAVAL SUPPLY SYSTEMS COMMAND
NAVAL LEGAL SERVICE COMMAND
NAVAL SECURITY & INVESIGATIVE COMMAND
NAVAL SPACE COMMAND
*SHORE ESTABLISHMENT
NAVAL SEA SYSTEMS COMMAND
BUREAU OF MEDICINE AND SURGERY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL SECURITY GROUP COMMAND
NAVAL OCEANOGRAPHY COMMAND
NAVAL AIR SYSTEMS COMMAND
NAVAL EDUCATION & TRAINING COMMAND
NAVAL INTELLIGENCE COMMAND
NAVAL TELECOMMUNICATIONS COMMAND
NAVAL DATA AUTOMATION COMMAND
SUPPORTING ESTABLISHMENT
MARINE CORPS RESERVE
SUPPORT
NAVAL RESERVE FORCE
U.S. NAVAL FORCES EUROPE
NAVAL FORCES CENTRAL COMMAND
NAVAL SPECIAL WARFARE COMMAND
ATLANTIC FLEET (INCLUDES FLEET MARINE FORCES)
OPERATING FORCES OF THE MARINE CORPS
*OPERATING FORCES
OPERATIONAL TEST & EVALUATION FORCE
NAVAL FORCES SOUTHERN COMMAND
MINE WARFARE COMMAND
MILITARY SEALIFT COMMAND
PACIFIC FLEET (INCLUDES FLEET MARINE FORCES)

*ALSO INCLUDES OTHER DESIGNATED ACTIVITIES NOT SHOWN ON THE CHART WHICH ARE UNDER THE COMMAND OF SUPERVISION OF THE ORGANIZATIONS DEPICTED

Figure 1-1.—Organization of the Department of the Navy.

readiness. Fleet readiness consists of personnel-, material-, and training-readiness.

1. **Personnel readiness** includes the quantitative aspect of meeting total manning requirements and the qualitative aspect of providing the necessary skills for operations and maintenance.
2. **Material readiness** encompasses the required maintenance and logistic support for effective operations.
3. **Training readiness** requires sufficient operating time in terms of steaming days and flying hours and sufficient participation in exercises to ensure a capable and proficient military force.

CHAIN OF COMMAND

The chain of command is defined as the succession of commanding officers/officers in charge, from a superior to a subordinate, through which command is exercised. There are two coexisting chains of command: (1) the administrative chain of command and (2) the operational chain of command.

THE MINE FORCE ADMINISTRATIVE CHAIN OF COMMAND

The **administrative chain of command** consists of forces of a warfare type. For the Mine Force, as with all of the Department of the Navy, this begins with the President. Next, it flows to the Secretary of Defense, the Secretary of the Navy, the Chief of Naval Operations, and then to Commander, Mine Warfare Command, and Commander, Mobile Mine Assembly Groups. Finally, the chain of command ends with the individual Mobile Mine Assembly Group unit/detachment commanding officers/officers-in-charge. See figure 1-2.

THE OPERATIONAL ORGANIZATION OF THE DEPARTMENT OF THE NAVY

Command of the operating forces of the fleet at all echelons is exercised through the **operational organization**. The Department of the Navy, through its administrative organization, organizes, trains, and equips forces, which are then employed operationally in the unified command structure.

THE MINE FORCE OPERATIONAL CHAIN OF COMMAND

The operational chain of command, or task structure, comprises forces from one or more warfare types, which are organized to accomplish an assigned task or function of an operational nature. For the Mine Force this begins with the President and the Secretary of Defense, as National Command Authority, and continues through the Chief of Naval Operations, to Fleet Commanders in Chief, and finally to the individual Mobile Mine Assembly Group unit/detachment commanding officers/officers-in-charge. See figure 1-3.

MINE FORCE ORGANIZATION

The Commander, Mine Warfare Command (COMINEWARCOM), under the CNO (see fig. 1-4), acts in all matters that affect mine warfare readiness, training, tactics, and doctrine for active naval forces and corresponding naval reserve programs. He coordinates with fleet Commanders-in-Chief (CINC) and the Office of the Chief of Naval Operations (OPNAV) on matters that affect fleet mine warfare readiness above the level of individual surface ships, aircraft squadrons, submarines, and other forces that possess a mining and/or mine countermeasures capability. On an additional duty basis, the Commander performs as technical adviser for mine warfare to CINCLANTFLT, CINCPACFLT, and CINCUSNAVEUR.

COMMANDER, MOBILE MINE ASSEMBLY GROUP (COMOMAG)

The Commander, Mobile Mine Assembly Group (COMOMAG) is under the administrative and operational control of COMINEWARCOM. COMOMAG is assigned the primary mission of maintaining the material readiness of LANTFLT, PACFLT, and NAVEUR mine stocks. In performance of this mission, COMOMAG is required to permanently man specified mine sites and to provide a reservoir of trained personnel, organized in mobile units. These units are capable of rapid deployment to afloat units and overseas mine sites for the purpose of assembling and final preparation of prepositioned mine stocks to support mining operations. Refer to figure 1-4.

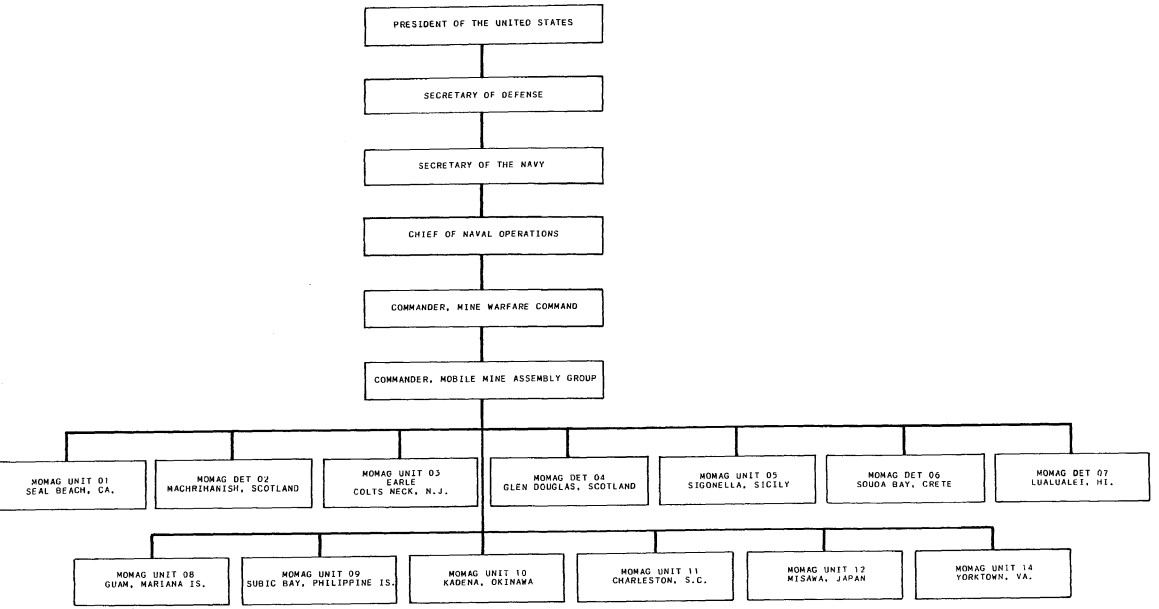


Figure 1-2.—Administrative chain of command.

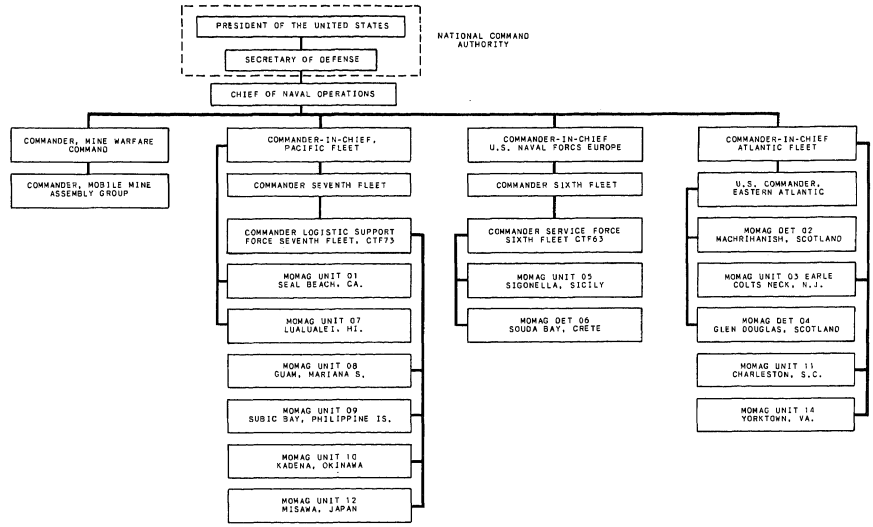
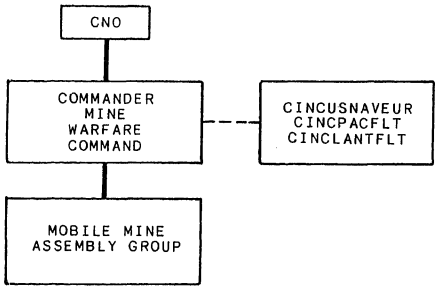

PRESIDENT OF THE UNITED STATES
SECRETARY OF DEFENSE
NATIONAL COMMAND AUTHORITY
CHIEF OF NAVAL OPERATIONS
COMMANDER, MINE WARFARE COMMAND
COMMANDER, MOBILE MINE ASSEMBLY GROUP
COMMANDER-IN-CHIEF, PACIFIC FLEET
COMMANDER SEVENTH FLEET
COMMANDER LOGISTIC SUPPORT FORCE SEVENTH FLEET, CTF73
MOMAG UNIT 01 SEAL BEACH, CA.
MOMAG UNIT 07 LUALUALEI, HI.
MOMAG UNIT 08 GUAM, MARIANA S.
MOMAG UNIT 09 SUBIC BAY, PHILIPPINE IS.
MOMAG UNIT 10 KADENA, OKINAWA
MOMAG UNIT 12 MISAWA, JAPAN
COMMANDER-IN-CHIEF U.S. NAVAL FORCS EUROPE
COMMANDER SIXTH FLEET
COMMANDER SERVICE FORCE SIXTH FLEET CTF63
MOMAG UNIT 05 SIGONELLA, SICILY
MOMAG DET 06 SOUDA BAY, CRETE
COMMANDER-IN-CHIEF ATLANTIC FLEET
U.S. COMMANDER, EASTERN ATLANTIC
MOMAG DET 02 MACHRIHANISH, SCOTLAND
MOMAG UNIT 03 EARLE COLTS NECK, N.J.
MOMAG DET 04 GLEN DOUGLAS, SCOTLAND
MOMAG UNIT 11 CHARLESTON, S.C.
MOMAG UNIT 14 YORKTOWN, VA.

Figure 1-3.—Operational chain of command.



MOBILE MINE ASSEMBLY GROUP UNITS AND DETACHMENTS

Mobile Mine Assembly Group (MOMAG) Units and Detachments are under the administrative control of COMOMAG; they report operationally to the appropriate Fleet CINC. Refer again to figures 1-2 and 1-3. The primary mission of the MOMAGs is to maintain mine material readiness. MOMAGs assemble and complete final preparation of Prepositioned War Reserve Material Stock (PWRMS) Service Mines and Destructors in support of mining operations and mine warfare. This is accomplished in accordance with the general war, contingency and peacetime training plans of CINCLANTFLT, CINCPACFLT and CINCUSNAVEUR. MOMAGs are also tasked to provide and maintain the readiness of Mine Warfare Exercise and Training assets as directed by COMINEWARCOM. MOMAG units and detachments also have their administrative chain of command (fig. 1-5) and their operational chain of command (fig. 1-6).

Through the study of the organizational charts in this chapter, you should be able to see relationships between your command and other commands of the Navy.

SUMMARY

In this chapter, you have seen how the mineforce fits within the overall Naval structure as an operating force, and its basic relationship to other navy commands.

You have seen how the navy is administratively and operationally organized and how this applies to readiness in the areas of personnel, material, and training.

You can now follow the chain of command, through block diagram, from the Unit/Detachment level to the CNO, through both the administrative and operational chains of command.

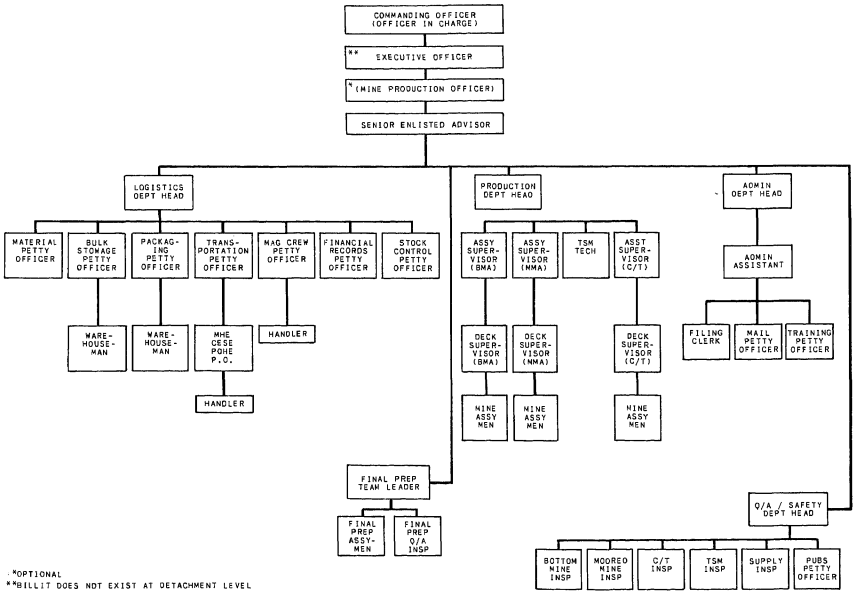
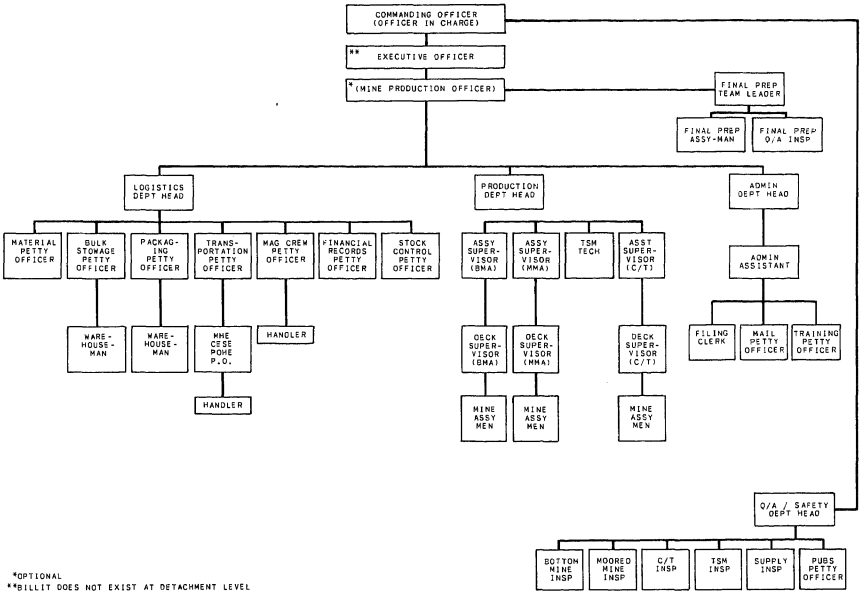


Figure 1-5. Standard administrative organizational chart for MOMAG unit/detachment.



*OPTIONAL
**BILLIT DOES NOT EXIST AT DETACHMENT LEVEL

Figure 1-6.—Standard operational organizational chart for MOMAG units/detachments.

REFERENCES

Organization of the United States Navy, NWP-2 (Rev-C), Office of the Chief of Naval Operations, Washington, D.C., 1985.

Standard Organization and Regulations of the U.S. Navy, OPNAVINST 3120.32.A, Office of the Chief of Naval Operations, Washington, D.C., 27 March 1979.

Standard Organization for MOMAG Units and Detachments, COMOMAGINST 5400.2, Commander Mobile Mine Assembly Group, Charleston, S.C., 24 June 1985.

United States Navy Regulations, 1973, Officer of the Secretary of the Navy, Washington, D.C., 1973.

CHAPTER 2

MINE WARFARE RELATED PROGRAMS

A program can be defined as a procedure or system for solving a problem through the collection of facts, processing, and presentation of the results to obtain an established goal.

After completion of this chapter you should be able to discuss in detail the various major programs in which you, as a supervisor, and all Mine Force personnel participate as they relate to the following:

- Safety
- Quality Assurance
- Explosive Handling Qualification/ Certification
- Calibration
- Mine Exercise and Evaluation

These programs are designed to support the Mine Force and to provide a constant evaluation of personnel, weapons systems, and associated equipment.

NAVY OCCUPATIONAL SAFETY AND HEALTH (NAVOSH) PROGRAM

This program covers all safety methods. The major one you will be concerned with under this section is occupational safety and health. As the title implies, the NAVOSH Program specifically addresses the maintenance of safe and healthful conditions in the workplace or the *occupational* environment. OPNAVINST 5100.8, outlines the purpose of this program and OPNAVINST 5100.23 gives the details required to carry out the specifics of this program.

By direction of OPNAVINST 5100.8, echelon 2 commanders (that is, COMINEWARCOM) are responsible for making sure that their commanders, commanding officers, officers in charge, and *supervisors* conduct an aggressive safety and mishap preventions program. They are also to assign safety responsibilities to qualified personnel as a primary duty billet where possible. If this cannot be done because of manning levels, it will be assigned as a collateral duty. As the supervisor, you are responsible for following these directives and for making sure that each individual complies with safety and occupational health standards.

The following portions of this section briefly cover some of the primary programs under the NAVOSH Program of which it is your responsibility to understand, comply with, and assist your command in all aspects of safety.

PERSONAL PROTECTIVE EQUIPMENT

As the supervisor, you are responsible for making sure all personnel have, use, and maintain personal protective equipment. This equipment is designed to prevent or reduce the severity of injuries.

It must be recognized that personal protective devices do nothing to reduce or eliminate the hazard itself. They merely establish a "last line of defense" to the hazard. So, if the equipment is not used or maintained properly, it is of no value. For this reason, mandatory enforcement of equipment use is the key element in an effective personal protective equipment program.

The following must be taken into consideration for the issue of personal protective equipment:

1. **Eye and face protection** must be worn when there is a probability of flying particles and chips, splashes from liquids such as acids and solvents, operations that generate hot slag or molten metals, and in banding and pelletizing operations.
2. **Respiratory protection** must be worn when personnel are exposed to harmful dusts, fogs,

OPNAVINST 5100.19 provides additional information on the selection of respiratory protection devices.

3. **Head protection**, helmets or hard hats, must be worn when there is a possibility of impact from falling objects and at all times when operating materials-handling equipment (MHE).

4. **Foot protection** must be worn when personnel are engaged in activities that involve danger from heavy falling objects. This can involve almost any job in a mine shop.

5. **Electrical protective devices** must be used when there is a possibility of personnel working on energized circuits, and should include rubber gloves, and rubber matting.

6. **Hearing Protection** must be worn by all personnel when they must enter or work in an area where the noise levels are greater than 84 decibels. The determination of which hearing devices are suitable for use is the responsibility of the industrial hygienist, or other competent personnel under the direction of an industrial hygienist.

All personal protective equipment will be of a safe design and construction for the work to be performed. Standards and specifications for the design and use of this equipment have been developed as a result of extensive research and testing. Only those items that have been recognized and approved should be used.

This is not meant to be an all-inclusive list. It is your responsibility to make sure your personnel have the proper equipment and that all instructions are followed. All the safety devices, equipment, and instructions will be of no use to you if they are not used as they were intended.

SAFETY REPORTS

As a supervisor, division safety petty officer, or command safety officer, you may be required to prepare reports or conduct investigations involving accidents, incidents, mishaps, near-mishaps, or other situations involving safety matters. Although there are numerous reports required concerning safety incidents, only a few are mentioned in this section. Since some reports must be submitted within a few hours after an incident, the command safety officer should maintain a tickler file on all required safety reports. COMOMAGINST 5213.4, *Consolidated List of Recurring Reports*, can be used as an aid in developing such a tickler file.

AND REPORTING

A mishap can be defined as any unplan unexpected event causing personnel i occupational illness, death, or material l damage or an explosion of any kind w damage occurs or not.

OPNAVINST 5102.1 gives the proce requirements, and the format for investigati reporting mishaps, associated injuries fatalities along with material (property) da These reporting requirements are applicabl Navy units and activities and are clearly d in OPNAVINST 5102.1.

There are reports that cover all aspe naval operations but do not apply commands. There are four basic types of r you will be concerned with that are requi OPNAVINST 5102.1:

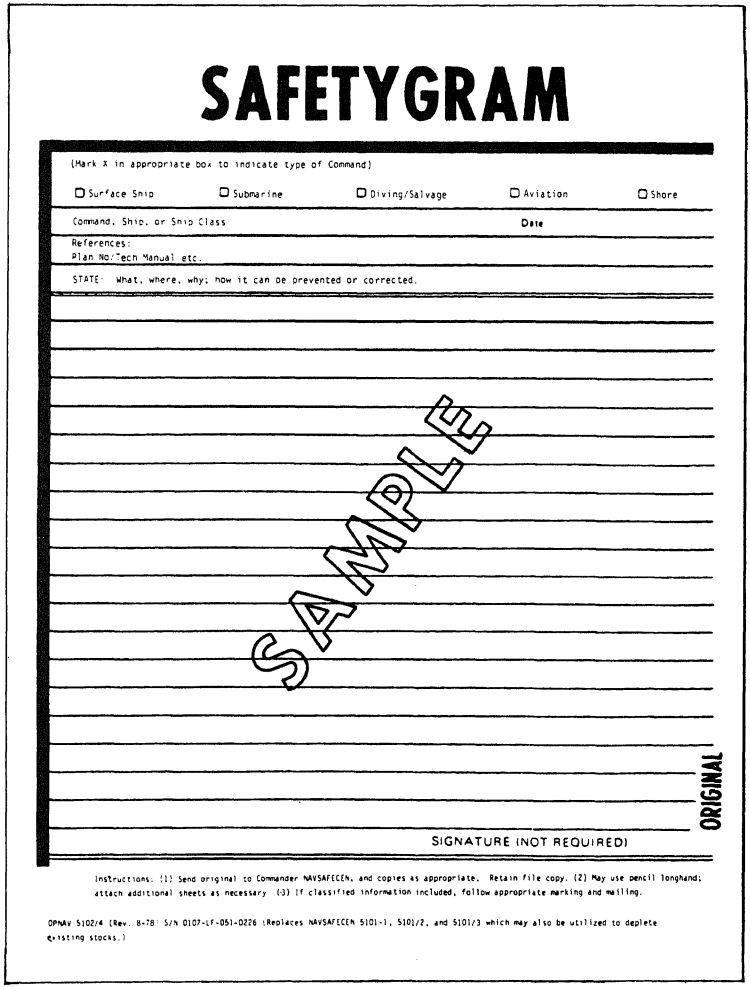
1. Personnel injury/death/occupa illness
2. Material (property) damage misha
3. Explosive mishap
4. Motor vehicle mishap

Each type of report has specific require and procedures for its submission. Dep upon the type of incident, a telephone repo be required in addition to the message rep some situations, more than one type of repo be required for the same incident.

NOTE: The reports listed in this secti not meant to be all-inclusive. Certain occur events, and situations are exempted fro requirements of OPNAVINST 5102.1. B you check all current instructions for s guidance concerning your reports.

SAFETY RECOMMENDATION (SAFEREC) PROGRAM

The Safety Recommendation (SAFE Program is designed to reduce accidental to Navy personnel and to reduce damage to property. Personnel who are in day-t contact with their job represent a large sou information on the safety involved in workplace. Recommendations from these p nel can be made by SAFETYGRAM, OI Form 5102/4 (fig. 2-1), or by the cha command.



SAFETYGRAM

(Mark X in appropriate box to indicate type of Command)

☐ Surface Ship ☐ Submarine ☐ Diving/Salvage ☐ Aviation ☐ Shore

Command, Ship, or Ship Class Date

References:
Plan No./Tech Manual etc.

STATE: What, where, why; how it can be prevented or corrected.

SAMPLE

ORIGINAL

SIGNATURE (NOT REQUIRED)

Instructions: (1) Send original to Commander NAVSAFECEN, and copies as appropriate. Retain file copy. (2) May use pencil longhand; attach additional sheets as necessary. (3) If classified information included, follow appropriate marking and mailing.

OPNAV 5102/4 (Rev. 8-78) S/N 0107-LF-051-0226 (Replaces NAVSAFECEN 5101-1, 5101/2, and 5101/3 which may also be utilized to deplete existing stocks.)

Figure 2-1.—SAFETYGRAM, OPNAV Form 5102/4.

The Naval Safety Center will receive input and evaluate the recommendations and forward them for action to the appropriate authority. For SAFERECs to be effective, it is important that they be filled out properly and provide as many details as possible.

HAZARDOUS MATERIAL SAFETY PROGRAM

The Hazardous Material Safety Program is a Navywide program to assure safe usage of hazardous materials. Materials ordinarily thought to be safe may be rendered hazardous under certain use conditions by the uninformed user. Therefore, it is imperative that accident prevention designed to control and regulate the identification, transportation, storage, and use of hazardous materials be implemented to protect the user and general public.

Except as noted, hazardous material as used in this program is any material that by virtue of its potentially dangerous nature requires controls to assure adequate protection of life, health, and property. The definition, for the purpose of this program only, excludes ammunition, explosives, weapons, explosive-actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, and bulk fuels.

HAZARDOUS MATERIAL CONTROL AND MANAGEMENT (HMC&M)

OPNAVINST 4110.2, *Hazardous Material Control and Management*, establishes the policies, guidance, requirements, and management of Hazardous Material acquired and used by the Navy. This instruction gives guidelines for the reporting, management, and recordkeeping of hazardous materials. It also requires that all activities make sure that personnel coming in contact with hazardous material be indoctrinated and trained in the proper handling procedures of hazardous material and be provided with and required to use personal protective equipment. It also contains information on Host/Tenant command relationships in regards to hazardous material.

Hazardous Items Listing

DODINST 6050.5L, *Hazardous Items Listing*, is a list of potentially hazardous material in the Navy supply system, available on microfiche. The microfiche is divided into sections. The required information is provided in National Item Identification Number (NIIN) sequence. Information on many non-stock items is also available, and is cross-referenced by manufacturers part number, trade name, specifications, and Federal Supply Code for Manufacturers (FSCM). Instructions for using the microfiche are provided in the *Hazardous Materials Procedures Manual* (DOD 6050.5-M).

MATERIAL SAFETY DATA SHEETS (MSDS)

Material Safety Data Sheets (MSDS) will be maintained on all material used and will be made available to the users of the hazardous material. The MSDS or a narrative summary of the MSDS information should be included as a part of hazardous material training programs.

HAZARDOUS MATERIALS WARNING LABELS

Hazardous materials warning labels are necessary to clearly show the hazardous nature of the contents of packages at all stages of storage, handling, use, and disposal. When unit packages are removed from shipping containers, the continuity of information must be maintained. The label should identify the hazardous chemical contained and provide the appropriate hazard warnings (fig. 2-2).

Brief descriptions of the numbers used on the hazardous materials labels are provided in table 2-1. National Fire Protection Association (NFPA) 704M, *Identification of the Fire Hazards of Materials*, gives more detailed descriptions of hazard degrees.

NAVY EXPLOSIVES SAFETY PROGRAM

Explosives safety is the entire area of activity concerned with the prevention of the premature, unintentional, or unauthorized initiation of explosives and devices containing explosives; and with minimizing the effects of explosions, combustion, toxicity, and any other harmful effects. It includes all mechanical, chemical, biological, and electrical hazards associated with explosives; hazards of electromagnetic radiation

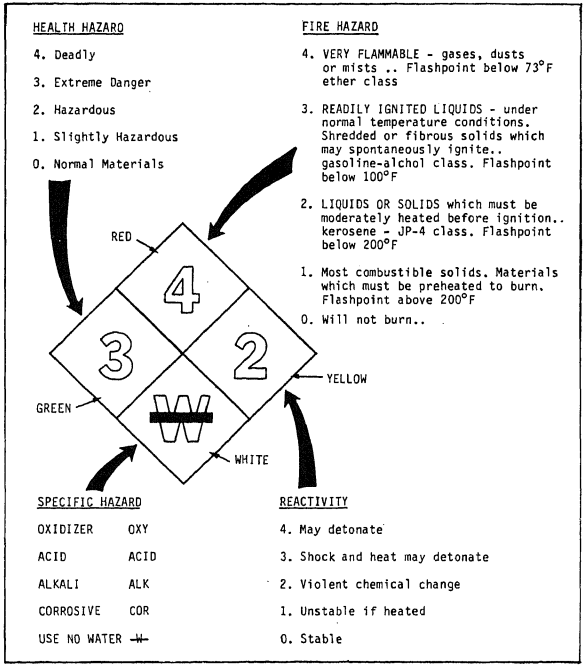

HEALTH HAZARD
4. Deadly
3. Extreme Danger
2. Hazardous
1. Slightly Hazardous
0. Normal Materials
FIRE HAZARD
4. VERY FLAMMABLE - gases, dusts or mists .. Flashpoint below 73°F ether class
3. READILY IGNITED LIQUIDS - under normal temperature conditions. Shredded or fibrous solids which may spontaneously ignite.. gasoline-alchol class. Flashpoint below 100°F
2. LIQUIDS OR SOLIDS which must be moderately heated before ignition.. kerosene - JP-4 class. Flashpoint below 200°F
1. Most combustible solids. Materials which must be preheated to burn. Flashpoint above 200°F
0. Will not burn..
RED
4
3
2
YELLOW
GREEN
W
WHITE
SPECIFIC HAZARD
OXIDIZER OXY
ACID ACID
ALKALI ALK
CORROSIVE COR
USE NO WATER -W-
REACTIVITY
4. May detonate
3. Shock and heat may detonate
2. Violent chemical change
1. Unstable if heated
0. Stable

Figure 2-2.—Hazardous materials warning label.

to explosive ordnance; and combinations of the foregoing.

Equipment and/or systems whose malfunctions would hazard the safe handling, maintenance, storage, release, delivery, or firing of explosives are included.

RESPONSIBILITY FOR EXPLOSIVES SAFETY

Explosives safety, like all safety, is the responsibility of all commands and personnel. However, specific commands are assigned certain responsibilities for the overall program.

Naval Sea Systems Command

Under the supervision of the Deputy Chief

COMNAVSEASYSCOM is tasked to establish and issue technical standards and criteria and to provide technical guidance and assistance to all components of the Department of the Navy (DON). Further, they are to provide technical advice and evaluations to the CNO in areas where operational requirements conflict with technical requirements. COMNAVSEASYSCOM directs and coordinates the efforts of all technical offices in regard to explosives safety and prepares data as necessary to analyze the effectiveness of the program. COMNAVSEASYSCOM also provides the necessary technical advice and guidance for the development of training programs to establish a level of competence to ensure success of this program. They also establish, issue, and implement appropriate regulations, technical standards,

Table 2-1.—NFPA Hazard Identification System

Identification of Health Hazard Color Code: BLUE		Identification of Flammability Color Code: RED		Identification of Reactivity (Stability) Color Code: YELLOW	
Type of Possible Injury		Susceptibility of Materials to Burning		Susceptibility to Release of Energy	
Signal		Signal		Signal	
4	Materials which on very short exposure could cause death or major residual injury even though prompt medical treatment was given.	4	Materials which will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature, or which are readily dispersed in air and will burn readily.	4	Materials which are readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures.
3	Materials which on short exposure could cause serious temporary or residual injury even though prompt medical treatment was given.	3	Liquids and solids that can be ignited under almost all ambient temperature conditions.	3	Materials which are capable of detonation or explosive reaction but require a strong initiating source or which must be heated under confinement before initiation or which react explosively with water.
2	Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given.	2	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.	2	Materials which are normally unstable and readily undergo violent chemical change but do not detonate. Also materials which may react violently with water on which may form potentially explosive mixtures with water.
1	Materials which on exposure would cause irritation but only minor residual injury even if no treatment is given.	1	Materials that must be preheated before ignition can occur.	1	Materials which are normally stable, but which can become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.
0	Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.	0	Materials that will not burn.	0	Materials which are normally stable, even under fire exposure conditions, and which are not reactive with water.

shore activities. These involve the preparation, assembly, loading, testing, storing, handling, shipping, use, and maintenance of ammunition, explosives, and other dangerous articles.

MOMAG Activities

All commands having custody of explosive material must comply with applicable directives and guidance issued by proper authority, make sure that explosive material is handled by qualified personnel, and submit reports concerning explosive accidents/incidents.

EXPLOSIVE MISHAP REPORTS

There is a very high potential for catastrophe inherent to mishaps involving explosives. The requirements for reporting explosive mishaps, therefore, are more stringent than for any other type of mishap. OPNAVINST 5102.1 establishes the requirements for reporting all mishaps involving nonnuclear explosive ordnance or explosive material, chemical agents and systems, and the procedures to be followed subsequent to these mishaps. In addition, NAVSEA SW550-FO-PMS-010 (formerly OP 3379) requires that a Mine-System Class B Data Report (supplement B sheet) be prepared when explosive items are damaged in storage or during handling.

NONNUCLEAR ORDNANCE EXPLOSIVE HANDLING QUALIFICATION AND CERTIFICATION PROGRAM

The improper handling, loading, processing, or testing of explosive devices has in the past resulted in death, injury, and damage, as well as in reduced operational effectiveness of both fleet and shore activities. Investigations have shown that a major cause of mishaps with explosive devices has been personnel error. Analyses of mishaps clearly caused by personnel show that the following factors are those most commonly encountered:

1. Lack of effective use of available training, or lack of knowledge on the part of individuals or teams who handle explosive devices
2. Lack of necessary and effective leadership and supervision by the supervisory personnel directly responsible for operations involving explosive devices
3. High tempo operations during which explosives safety tends to be degraded as a result of fatigue, shortcuts to get the job done on time, or complacency stemming from rapid, repeated, and often monotonous tasks
4. Loss of continuity caused by the discharge, transfer, promotion, or retirement of experienced personnel and/or receipt of personnel whose precise qualifications and experiences are generally unknown
5. During certain evolutions, the temporary assignment of personnel to perform ordnance-related tasks for which they may not be specifically qualified
6. Failure to follow and/or maintain current standard operating or job procedures that have been established for specific processes or evolutions involving explosives/explosive devices

In recognition of the need for reducing personnel-induced explosive mishaps, the Nonnuclear Ordnance Explosive Handling Qualification and Certification Program was established. The program is an integral part of the Navy Explosives Safety Program. It is the intent of the qualification and certification program that personnel directly involved with ammunition or explosives be certified by the command or organizational unit to which they are assigned as having satisfactorily demonstrated their qualifications to perform safely all functions, tasks, and evolutions involving explosive devices. It is also the intent of this program that personnel be properly trained and qualified before they are certified to perform any task involving explosive devices individually or as members of a team.

Procedures and requirements concerning the qualifications of personnel under this program are contained in OP 5, *Ammunition and Explosives Ashore*; OPNAVINST 8023.2, *U.S. Navy Explosives Safety Policies, Requirements, and Procedures*; and NAVSEAINST 8020.9, *Qualification and Certification of Personnel Performing/Supervising Conventional Ammunition/Explosive Operations*. Basic qualifications under this program require personnel to do the following:

1. Be physically and mentally qualified and certified
2. Receive a general indoctrination in the hazards of explosive material/devices; general safety, fire, security, and health regulations; and emergency or hazardous conditions and reporting procedures
3. Demonstrate competent knowledge and application of each evolution (assembly, disassembly, testing, and so forth) with the specific

explosive devices for which they are being qualified

4. Be specifically qualified as individuals, team members, or team leaders (supervisors)

CERTIFICATION

Upon being qualified and recommended for certification, each individual will be issued final certification by the commanding officer/officer in charge or by the command's certification board.

Certification Board

Each activity must establish a certification board in conjunction with this program. The board must consist of at least two persons—the responsible department head (or comparable organizational representative) and an individual (E-6 or above) who is certified to perform the functions, tasks, or evolutions under consideration. The certification board must approve or disapprove each certification based on the following:

1. Information provided by a supervisory-level person who has been certified and qualified to perform the task under consideration and to evaluate the person being certified
2. The medical evaluation of the person being certified
3. The supervisor's evaluation of the person being certified
4. Information contained in the service record of the person being certified

Duration of Certification

Certification, unless revoked for cause, is valid for a maximum of 12 months. A renewal of the certification, whether issued at the time of expiration or later, will be granted only after the individual or team qualification has been validated by the certification board. Whenever possible, complete requalification should be done before renewal of certification. In addition, individuals must be physically and mentally qualified and certified yearly, before certification is renewed.

Revocation of Certification

Commanding officers/officers in charge are responsible for revocation of individual or team certifications whenever such action is deemed to be in the best interest of safety. Revocation of certification of involved individuals and/or teams, including the team leader, is mandatory in the event an explosive mishap is caused by failure to stick to authorized procedures; flagrant disregard of safety precautions; reckless operation of explosive devices or handling equipment; or other behavior indicating incompetence or unreliability. Personnel whose certification has been revoked must be retrained until requalified and recertified, if the commanding officer/officer in charge considers such action appropriate and advisable. If, however, an individual has shown that such retraining may be ineffective, the individual must be assigned tasks or operations that do not involve explosive materials. Revocation of certification of military personnel for cause will require an entry in the appropriate portion of the individual's service record stating the specific reason for revocation. (See MILPERSMAN 5030420.3 concerning derogatory entries.)

Transfer of Certification

The acceptance of certification of military personnel transferred to another activity is at the discretion of the commanding officer/officer in charge of the receiving activity.

QUALIFICATION AND CERTIFICATION RECORDS

Each activity must maintain records indicating the personnel who have been qualified and certified to handle ammunition or explosive material, and the levels, standards, and explosive families of such qualifications and certifications. COMOMAGINST 8020.4 illustrates the appropriate form that should be used to record the qualifications and certifications of an individual. Copies of this form should be placed in the command files, the individual's service record (page 4 entry), and the individual's training record. Whether to maintain a board or chart showing the qualifications/certifications of command personnel is at the discretion of the command.

QUALITY ASSURANCE PROGRAM

It is the policy and goal of NAVSEASYSCOM to provide the fleet with safe ordnance material of the highest quality possible in a timely manner. This policy is reflected in the basic priorities of

safety first, quality second, and quantity last. This policy is implemented through a comprehensive quality assurance (QA) program which is applied during material acquisition from contractors and during receipt, production, maintenance, storage, and issue of ordnance material.

The NAVSEASYSCOM Quality Assurance Program provides uniform quality control throughout all phases of weapon processing to make sure weapons will perform satisfactorily. That is accomplished by applying uniform inspection requirements, plans, and procedures. All aspects of ordnance material are subject to inspection by supervisors and QA inspectors. Inspections are performed to aid in the reduction of human error and to make sure all material used is of the proper type, quantity, and quality. QA inspections are not used to relieve supervisors of their responsibilities, but to enhance the reliability of weapons or weapons systems.

PERSONNEL REQUIREMENTS

All personnel whose work assignments may affect the quality of ordnance material must have the knowledge and skills necessary to perform safe and quality work. To achieve this, personnel assigned to ordnance-related work must be given general indoctrination as well as specific training in the ordnance work to be performed. The indoctrination must include a segment on quality assurance. Quality assurance must be aimed at achieving the following objectives:

1. Motivating all personnel to attain high-quality performance in ordnance work
2. Developing an appreciation for the importance of and the need for an organized and effective QA program
3. Familiarizing personnel with the ordnance QA procedures

Personnel assigned duties as QA inspectors must be provided detailed training in the application of QA procedures and the safety, quality, and technical requirements of the specific ordnance materials involved in their work assignments. Refresher QA training indoctrinations must also be provided at least annually.

QA inspectors are to be used as safety observers at all times. Considering this, they should be familiar with the safety procedures and requirements of the job at hand. Before each evolution and during the quarterly safety stand-downs, QA inspectors will brief all command personnel on safety.

Visual identification of QA inspectors will be performed in the working spaces by the inspectors wearing a green hard hat or a green ball cap.

Supervisors and QA personnel must be constantly alert to the need for refresher training or other specific ordnance-related training, as evidenced by the quality of the work performed. Supervisors are responsible for ensuring that necessary on-the-job training or classroom training is provided before assigning personnel to new jobs related to ordnance material processing.

QA INVENTORIES AND INSPECTIONS

QA inventory and inspection procedures can be found in pertinent technical publications and must be followed in the verification of the quality of mines and associated material. Commitment to procedures is essential to readiness.

Inventories

Physical inventory is a requirement for efficient inventory control. To achieve this requirement, the stock balance and location of an item must be in agreement with the stock record card for that item. Inventories will accomplish this and in the process will accomplish the following:

1. Determine and reconcile differences between physical count and stock record card balance
2. Determine stock deficiencies that require corrective action
3. Make sure material is correctly identified
4. Make sure material is properly stored and packaged

The primary inventory will be the *Monthly 1/12th* Inventory. This allows a 100 percent inventory of on-hand stock each year. Other inventories are as follows:

1. Periodic location to stock record card check
2. Random sampling for validation of previously conducted inventories
3. Selected item inventory
4. Random sampling of all stock items

In addition to these inventories, each time an item is transacted (issue or receipt), an inventory of the item involved will be made.

Receipt Inspection

All incoming shipments of serviceable mine material must be inspected by QA personnel and personnel from the activity's supply division/section. The inspection must be conducted according to QAP 100, *Naval Ordnance Quality Assurance Procedures*, and COMOMAGINST 4855.1, *Quality Assurance Procedures*. QA personnel need only to sample or monitor inspections performed by supply personnel. Sealed containers need not be opened unless the condition of the container indicates possible damage or deterioration of the contents, or technical documents dictate otherwise. Receipt of field/fleet return material is normally limited to a visual examination for proper packaging and making sure no hazardous conditions exist. All material inspected must be tagged with an appropriate material condition tag or label as discussed later in this section.

Preshipment Inspection

All mine material leaving an activity must be inspected by QA personnel to make sure that preservation, packing, palletizing, and marking of the material is in compliance with applicable specifications and that the material is properly tagged to indicate identity, quantity, and condition.

Assembly/Disassembly/Maintenance Inspections

QA personnel, in conjunction with work center supervisors, are responsible for ensuring the quality of material undergoing tests, rework, maintenance, assembly, or disassembly. Pertinent technical manuals contain the necessary standard inspection procedures (SIPs) for QA and assembly/disassembly procedures. For areas not covered by SIPs QA personnel must monitor the quality of material by observing the procedures used, meter readings, and time limitations of work in process. After required maintenance or tests are completed, an appropriate condition code tag or label must be affixed to each item, container, or unit, and the information on the tag or label must be authenticated by QA personnel.

MATERIAL CONDITION CODE TAGS/LABELS

Material condition code tags (fig. 2-3) and labels are used to indicate the inspection and condition status of ordnance material, except material in process that has accompanying material condition status documentation. Material condition code tags and labels must be affixed to the material in a manner that permits easy identification of the condition of the material. When it is impractical to tag each item, the container, rack, bin, or drawer containing the items must be tagged or labeled.

Material condition code tags and labels are filled out by the person affixing the tag or label to the material. Periodically, QA personnel must monitor that process. However, all tags and labels attached to material identified as "serviceable" must be authenticated by a QA inspector, who will apply a QA inspection stamp or a signature to the tags and labels.

Material condition code tags and labels are identified and used as follows:

1. SERVICEABLE TAG/LABEL—Each tag and label has a yellow border on the front, and each tag has a yellow stripe across the back. The tags and labels are affixed to material that is serviceable and ready for issue for field or fleet use.

2. SUSPENDED TAG/LABEL—Each tag and label has a brown border on the front, and each tag has a brown stripe on the back. The tags and labels are affixed to material pending condition classification by an authorized group, activity, agency, or document. Material so tagged should not be issued for any purpose except for emergency combat use.

3. TEST/MODIFICATION TAG/LABEL—Each tag and label has a blue border on the front, and each tag has a blue stripe across the back. The tags and labels are to be affixed to material that will become serviceable upon completion of acceptable tests or modifications. Material so tagged will not be issued for any purpose other than for conducting the required tests and applying the necessary modifications.

4. UNSERVICEABLE (REPARABLE)—Each tag and label has a green border on the front, and each tag has a green stripe across the back. The tags and labels are affixed to material that is unserviceable because it is incomplete or requires limited restoration. Material so tagged should not be issued for any purpose except to conduct the required restoration or to complete the assembly of material to proper configuration.

5. UNSERVICEABLE (CONDEMNED)—Each tag and label has a red border on the front, and each tag has a red stripe across the back. The

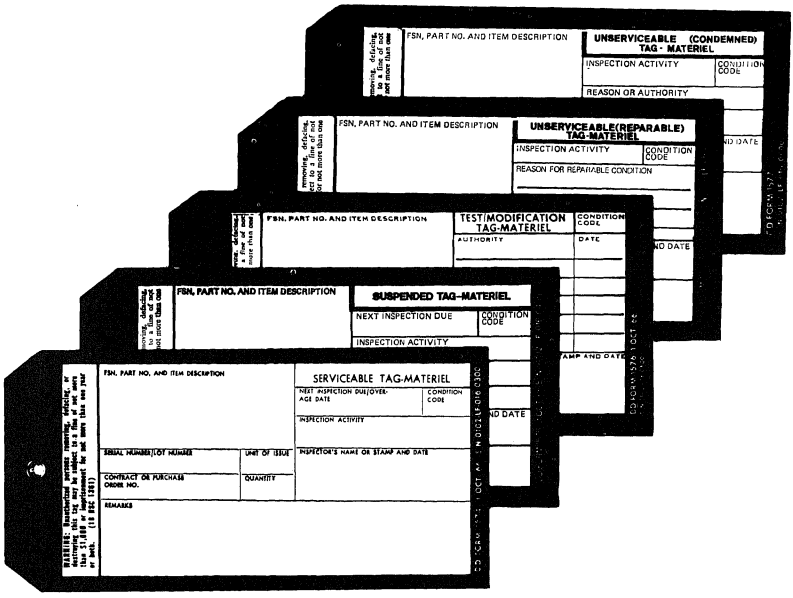


Figure 2-3.—Material condition code tags.

tags and labels are to be affixed to material that does not meet certain specifications and cannot be repaired, restored, or otherwise rendered economically serviceable. Material so tagged must not be issued for use and must be released only for scrapping or return to CONUS.

NAVY METROLOGY AND CALIBRATION (METCAL) PROGRAM

The Navy Metrology and Calibration (METCAL) Program is designed to make sure that measurements within the Navy are accurate, uniform, and traceable to the National Bureau of Standards, the U.S. Naval Observatory, or Department of Defense-approved sources. It also makes sure that accurate measurement standards are maintained, controlled, and made available to all Navy users of test and monitoring systems (TAMS) and metrology standards. General guidance and incidental information is provided by NAVMATINST 4355.74.

NAVY FIELD CALIBRATION ACTIVITY

Under the coordination of the Naval Material Command, the METCAL Program is structured to ensure the following:

1. The requirements of the program are conducted at the lowest level possible near the user of the test and monitoring systems.
2. The minimum number of calibration standards is required at the lowest level to maintain the accuracy and reliability of the test and monitoring systems.

There are several types of calibration activities responsible for maintaining test and monitoring systems. One activity is known as a Navy field calibration activity (FCA). Navy FCAs are located

at organizational- and intermediate-level maintenance facilities ashore and afloat. Using authorized standards, procedures, and equipment, FCAs (which are primarily manned by specially trained military personnel) provide calibration and repair of test and monitoring systems. MOMAG activities are designated as FCAs for specific test equipment and torque wrenches according to NAVSEASYSCOM and METCAL Programs.

CERTIFICATION REQUIREMENTS

Before implementing field calibration, MOMAG activities must be certified in writing by NAVMINEWARENGACT that onboard calibration requirements have been met. As a supervisor, you may be responsible for making sure that calibration requirements are maintained. If those requirements are not maintained, the command's operational and readiness capabilities may be downgraded.

Basic Requirements

To be certified as a field calibration activity, specific personnel and environmental requirements must be met and maintained. OP 4541, *Description, Maintenance, and Field Calibration of Mine Test Sets*, and NAVSEA SW550-FO-PMS-010 (formerly OP 3379), *Underwater Mine Maintenance System*, outline the basic requirements in detail.

MOMAG activities must be manned by two or more persons who are assigned the Navy Enlisted Classification (NEC) code MN-1201 or who have appropriate service record entries indicating their completion of the mine test-set repair phase of the class C Mineman course of instruction administered by the Fleet and Mine Warfare Training Center. Commanding officers and officers in charge must make sure that personnel holding an NEC MN-1201 are fully qualified before performing such duties. Personnel who are assigned the NEC MN-1201 and were not performing in the test-set field calibration program but who are subsequently assigned thereto must be recertified according to COMOMAGINST 1221.1, *Recertification Program for Test Set Checkout Group Operator* (NEC-1201).

Other Requirements

Every piece of test equipment must have a calibration is due or a label indicating that calibration is not required. Calibration labels and tags require strict accounting and surveillance to ensure proper use. Commanding officers and officers in charge must control release of the labels and tags, issuing them only when satisfied that calibration and/or repairs have been properly performed. In addition, no more than a 6-month supply of required labels and tags may be stocked at a field calibration activity. Information on the labels and tags authorized for use in the test-set and torque-wrench calibration programs is contained in OP 4541.

REPORTS

The reporting system for the METCAL Program is known as Metrology Automated System for Uniform Recall and Reporting (MEASURE). MEASURE is designed to provide participating activities with a standardized system for the recall and scheduling of test and monitoring systems. Currently, the Metrology Equipment Recall and Report (METER) form is the only report form required by MOMAG activities when test equipment and torque wrench failures occur, or when calibrations or repairs are attempted or accomplished. OPNAV Publication 43P6, *MEASURE Users' Manual*, outlines the procedures for completing the METER form.

MINE WARFARE EXERCISE AND TRAINING MATERIAL PROGRAM

The Mine Warfare Exercise and Training (ET) Material Program was established to support fleet training in all areas of underwater mine warfare. The ET Program is concerned principally with making sure material is available to fulfill the exercise and training requirements of the fleet.

EXERCISE AND TRAINING MINES

Exercise and training (ET) mines, for the most part, look and act like their service counterparts. ET mines provide activities with the means to improve their mine assembly, delivery, or countermeasures capabilities. ET mines use inert-loaded or empty mine cases; however, initiating explosive devices and/or pyrotechnics are contained in some mines to provide realism in mine delivery or firing

Actuation Mine

An actuation mine (fig. 2-4) is used in mine exercises and in influence-mine countermeasures training. An actuation mine is inert-loaded and is configured with the same type of components required to configure Mk 52 and Mk 55 service mines, excluding explosive devices associated with the explosive train. An actuation mine also incorporates a float that makes recovery easier and a

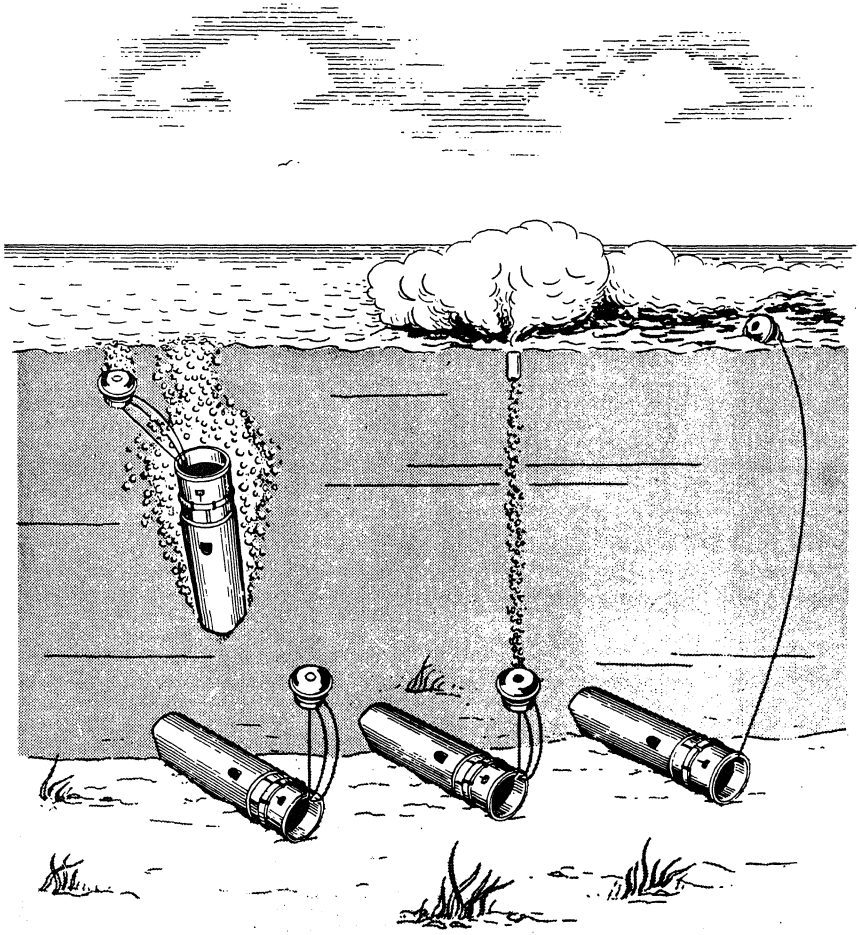


Figure 2-4.—Mk 52 and Mk 55 actuation mines, sequence of operation.

pyrotechnic signal that indicates mine actuation. When influenced by a target signal, an actuation mine responds exactly like a service mine except that mine detonation is simulated by the release of the pyrotechnic signal. The pyrotechnic signal burns and smokes when it reaches the surface of the water. Actuation mines contain a sonar transmitter and are painted orange with white stripes or white with orange stripes, depending on bottom conditions, as an aid to recovery.

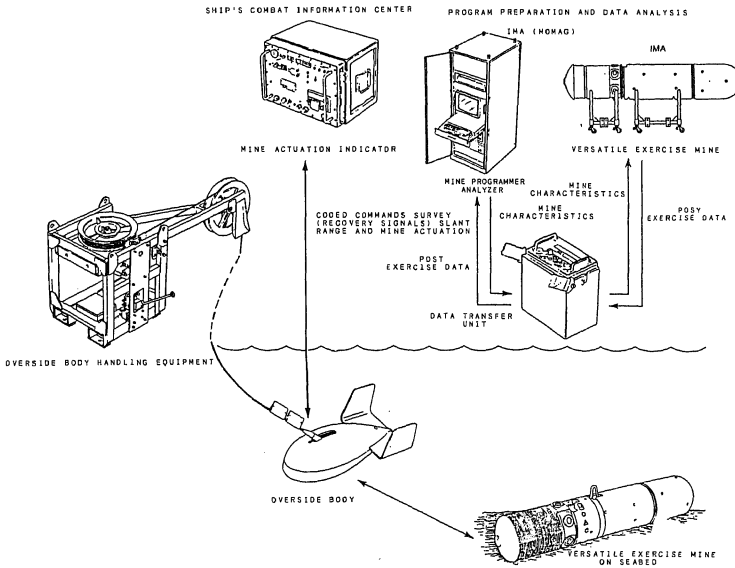
There are two types of actuation mines—flight and nonflight. The actuation mine (flight) employs functional flight gear and is planted by aircraft. The actuation mine (nonflight) does not use flight gear and is planted by surface craft.

Versatile Exercise Mine (VEM)

The Versatile Exercise Mine (VEM) is used to assess the effectiveness of surface/airborne mine countermeasure systems (sweeping and hunting) and the tactics/techniques employed by these systems. A VEM system is comprised of the Versatile Exercise Mine, Mine Actuation Indicator, Over-the-Side Transducer, Mine Programmer/Analyzer, Data Transfer Unit, a mine computer program, and special test and support equipment (fig. 2-5). The system can simulate the actuation system of most known bottom mines. In addition to assessing the effectiveness of mine countermeasures, the VEM can assist in the development of new mine sensors and minesweeping tactics. NAVSEA SW550-AE-MMI-070 and NAVSEA SW570-FO-MMO-050 give further information concerning the VEM.

Laying Mine

A laying mine is used for training aircraft and submarine crews in minelaying techniques. The case or explosive section, as appropriate, of a laying mine is inert-loaded to the service mine weight and maintains the center of gravity (CG) characteristics. The mine case or mechanism section contains no internal mine components. Externally, a laying mine incorporates functional flight gear, when applicable, and the components



that interface with the planting vehicle. The mine case of a laying mine does not contain explosives. Laying mines contain a sonar transmitter and are painted orange with white stripes or white with orange stripes, depending on bottom conditions, to aid in the recovery of the mine.

Handling Mine

A handling mine is used for training aircraft and submarine crews in the techniques of mine handling and loading. Like a laying mine, the case is inert-loaded to the service mine weight. The case contains no internal components except for a weighted instrument rack used to maintain the weight and CG characteristics of the service mine. Externally, the case is fitted with nonfunctional flight gear, when applicable, and the components that interface with the planting vehicle. Unlike laying mines, handling mines contain no sonar transmitter or explosives and their flight gear is nonfunctional. Handling mines are painted bronze for identification.

Shop Mine

The shop mine is used for mine familiarization, instructional purposes, and developing proficiency in mine assembling and testing. Its case is inert-loaded and contains all components necessary to constitute a fully assembled mine. However, inert- or dummy-loaded explosive devices are substituted for explosive-loaded components. A shop mine is painted blue.

Hunting Mine

The hunting mine is used by mine locating personnel to develop proficiency in the techniques of mine hunting with sonar. Since the purpose of a hunting mine is only to provide a planted shape, any inert mine case may be used.

Mechanical Sweep Mine

The mechanical sweep mine is an inert-loaded Mk 6 moored mine without actuation mechanisms. It is used for developing proficiency in mechanical minesweeping techniques. The Mk 6 mine case maintains a watertight integrity, and the Mk 6 or Mk 16 anchor is fully operational. The case of a mechanical sweep mine is painted orange with a white stripe and the anchor is painted black.

Certified Handling Mine

A certified handling mine is required for acceptance testing of shipboard weapons-handling installations on newly constructed ships and on other ships upon completion of shipyard overhaul. Certified handling mines are issued by NAVMINEWARENGACT to the ship requiring acceptance tests. Each mine is supplied with a signed certification check sheet that is valid for 1 year from the certification date. Annual certification of the condition and the external interface dimensions of the mine are required.

ET MINE ASSEMBLY CONFIGURATIONS

Unlike their service counterparts, exercise and training mines are NOT assembled and stored in the various degrees of assembly configurations (A, B, C, E, and F). Exercise and training mines may be assembled in one of two configurations.

1. All-up assembly—The term *all-up assembly* is used to designate a completely assembled ET mine. Configuration data for all-up assemblies are contained in the appropriate ET mine assembly manuals, OP 4363 series, which list the assembly-level items required for all authorized operational assemblies (OAs).
2. Subassembly—The term *subassembly* is used to designate an ET mine storage and shipping configuration, which commanding officers or officers in charge may elect to use at their option.

MAINTENANCE

The maintenance policy for service mines imposes programmed maintenance on assembled mine configurations to ensure mine readiness. The maintenance policy for ET mines imposes maintenance only on assembly-level items to make sure intermediate mine assembly activities can expeditiously support fleet training requirements.

Unlike service mines, maintenance on ET material is performed only when necessary or after an ET mine is recovered. Since MOMAG activities have custody of all ET material, they are responsible for all aspects of maintenance except maintenance on handling mines. When an activity other than a MOMAG activity has subcustody of handling mines, that activity is responsible for all minor maintenance of the mines. However, major maintenance or refurbishment must be performed by the MOMAG activity having custody of the

pyrotechnic signal that indicates mine actuation. When influenced by a target signal, an actuation mine responds exactly like a service mine except that mine detonation is simulated by the release of the pyrotechnic signal. The pyrotechnic signal burns and smokes when it reaches the surface of the water. Actuation mines contain a sonar transmitter and are painted orange with white stripes or white with orange stripes, depending on bottom conditions, as an aid to recovery.

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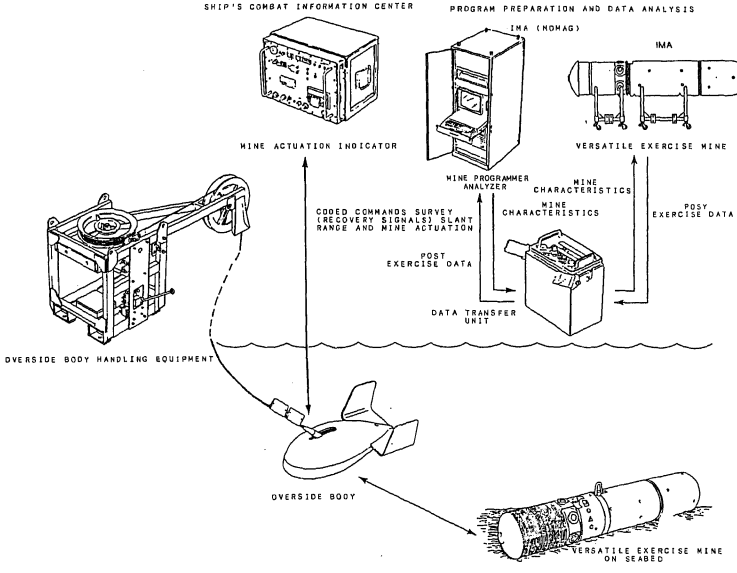

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Unlike their service counterparts, exercise and training mines are NOT assembled and stored in the various degrees of assembly configurations (A, B, C, E, and F). Exercise and training mines may be assembled in one of two configurations.

1. All-up assembly—The term *all-up assembly* is used to designate a completely assembled ET mine. Configuration data for all-up assemblies are contained in the appropriate ET mine assembly manuals, OP 4363 series, which list the assembly-level items required for all authorized operational assemblies (OAs).
2. Subassembly—The term *subassembly* is used to designate an ET mine storage and shipping configuration, which commanding officers or officers in charge may elect to use at their option.

MAINTENANCE

The maintenance policy for service mines imposes programmed maintenance on assembled mine configurations to ensure mine readiness. The maintenance policy for ET mines imposes maintenance only on assembly-level items to make sure intermediate mine assembly activities can expeditiously support fleet training requirements.

Unlike service mines, maintenance on ET material is performed only when necessary or after an ET mine is recovered. Since MOMAG activities have custody of all ET material, they are responsible for all aspects of maintenance except maintenance on handling mines. When an activity other than a MOMAG activity has subcustody of handling mines, that activity is responsible for all minor maintenance of the mines. However, major maintenance or refurbishment must be performed

mines. Refurbishment is the process by which assembly-level items are restored to acceptable operational conditions after they have been used in a mine exercise. OP 4363 contains complete instructions necessary for the maintenance and refurbishment of ET material.

BATTERIES FOR ET MINES

The batteries used in ET mines are of two types: those that are unique to the ET program and those that are used in common with service mines. Table 2-2 lists those batteries that are unique to the ET mine.

Except for the Mk 140, which is a rechargeable lead-acid type battery, batteries that are unique to the ET Program may be used only once. Repeated use of the Mk 140 requires that it be recharged after each use in a mine, before installation in a mine, and before issue by a depot activity.

Batteries that are used in common with the service mine may be used and reused in ET mines up to three times (maximum) as long as they meet the specifications of NAVSEA OP 4363, volume 1. The exceptions to the reuse rule for batteries are the Mk 117 and the Mk 121 batteries, which may be reused up to 30 times and 10 times respectively.

ALLOWANCES

OPNAVINST C8550.9, *Mine Exercise and Training Material Program*, establishes the basic allowances for ET mines. COMOMAGINST 8550.9, *ET Material Allowances and Reporting Criteria*, expands upon the allowance requirement in OPNAVINST C8550.9 by establishing specific ET allowances for MOMAG activities. In conjunction with these two instructions and OP 4363, each activity is required to maintain various ET mines and develop and maintain appropriate stocks of MET material used to support fleet training requirements.

Activities requiring the use of ET mines in support of training requirements must submit a request for the mines, via the appropriate chain of command, to the nearest MOMAG activity that stocks the mines. MOMAG activities receiving such requests must verify the availability of the requested assets and respond accordingly. The response should be made according to COMINE-WARCOMINST 8550.1, *Requesting Procedures for ET Material*, and COMOMAGINST 8550.9.

RECORDS AND REPORTS

MOMAG activities involved in ET mine operations are required to maintain records and submit appropriate reports.

Readiness and Operational Reports

Several reports, readiness and operational, concerning the available assets or operational performance of ET mines must be submitted by MOMAG activities. The format and reporting

Table 2-2.—Shelf Life and Storage Temperature for ET Mine Batteries

BATTERY	TYPE	SHELF LIFE, MONTHS	STORAGE TEMP, °F		
			MIN	MAX	NOMINAL
Mk 135-0(BA-1383)	Mercury	16	+10	+45	+15

an activity's capability to support the ET Program. This report is submitted in message format and according to COMOMAGINST 8550.9.

A Preliminary Post Analysis Message Report is required on exercises involving actuation mines. The preliminary message report must be submitted by MOMAG activities within 48 hours after the mine recovery phase of an exercise. This report is intended to aid the officer in charge of the exercise (OCE) with a quick-look critique of the mine countermeasures operations/exercise. An exercise operational report for actuation mines or laying mines is also required in connection with the Preliminary Post Analysis Message Report. The contents of the exercise operational report will depend upon the type of ET mines used during the exercise. COMOMAGINST 8550.1, *ET Program Reporting*, outlines the requirements and procedures for preliminary and operational reports.

Situation Report

Final preparation teams will submit a Situation Report upon arrival and after all criteria required by COMOMAGINST 3120.2 have been met.

Trip Report

Trip reports will be submitted at the completion of an exercise and within 5 days of the return of the observer or the final preparation team. A trip report will provide operational data to the commanding officer/officer in charge. The report will consist of a summary of events that occurred, problem areas encountered, and corrective actions taken during the operation. It also includes general comments and recommendations. Information concerning the requirements, procedures, and format are contained in COMOMAGINST 3120.2.

Ammunition Transaction Report

ET material, like service mine material, requires submission of an ammunition transaction report (ATR) upon receipt, issue, condition code change, or loss. ATRs for ET material use the same procedures and format as those for service

4 of this training manual.

IN-WATER RELIABILITY EVALUATION (IRE) MINE

The in-water reliability evaluation (IRE) mine is used to assess the operational reliability of service mines through a stockpile-to-target evolution that approximates, as closely as possible, their use in wartime employment. The IRE mine is identical to its service mine counterpart except that it is assembled with an inert-loaded mine case and a minimum of explosive devices. Special instrumentation such as a sonar transmitter (to ease recovery operations) and a time fire recorder (to record time of actuation) are installed. Except for the mine case and arming device, IRE mines are assembled using only serviceable components.

SUMMARY

This chapter has covered many of the major programs related to Mine Warfare. There are many others that are not directly related to the Mine Force but are related to the Navy in general. You, as the supervisor, must concern yourself with all of these programs, including those affecting personnel.

Remember, the responsibility for the smooth and efficient operation of your department/division and your personnel rests with you, the supervisor. The knowledge of these programs and how they effect your command will make your job easier and your command more effective.

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CHAPTER 3

OPERATIONS AND READINESS

Mine readiness requires special emphasis on advance planning, personnel training, capability for fast deployment of personnel, development of new and better tactics for minelaying in hostile environments, pre-positioning of mines, continued collection of intelligence, and research and development of new or improved mines. In addition, operational mines must be maintained in an assembly configuration that permits rapid upgrade and delivery to the laying vehicle. Mines must be ready for those areas in which a potential mining requirement exists, and for other contingencies.

Mines must be ready and plans prepared for transporting the mines to the delivery vehicle by a variety of means. Mine storage sites must be ready on short notice to deliver mines by water, land, or air transport, or combinations thereof, to the primary laying vehicles. Whatever method is used, the primary consideration is that the mines reach the planting agent quickly and in a state that requires minimal final preparation. This state of readiness will reduce the time required at the final preparation site and assist in assuring the quality and efficient functioning of the mines. Upon completion of this chapter, you will be able to explain, describe, and discuss the importance of the following areas:

- Mine production and processing
- Uniform Mine Warfare Planning System
- Mobile Mine Assembly Group training

This chapter presents only some of the procedures and requirements necessary for a MOMAG activity to maintain an acceptable readiness status. The classification of other material prevents its publication in this manual. Therefore, you, as a supervisor, are responsible for obtaining the additional information necessary to perform your assigned tasks.

MINE PRODUCTION AND PROCESSING

The most important aspect of a MOMAG activity is its capability to support mine assembly and production operations. Preplanned events must occur and be properly integrated to ensure a smooth and efficient flow of material. The work simplification system (Appendix I) has resulted in the development of vastly improved techniques in maintenance and assembly procedures for underwater mines. These improvements have enabled MOMAG activities to

- Increase the quality and type of the subassembled components required
- Reduce personnel errors and fatigue
- Improve basic procedures
- Simplify documentation requirements and procedures
- Significantly decrease mine assembly time

Each MOMAG activity is required to develop and maintain a standard flow plan for the processing and production of mines and mine material. COMOMAGINST 8550.12, *Standard Production and Processing Procedures for Mines*, provides the basic guidance and examples for developing a standard flow plan. A flow plan concerning mine production and processing will include the following as a minimum:

- Personnel assignments
- Administrative upgrade requirements
- Material-handling equipment (MHE) and civil engineering support equipment (CESE) requirements
- Functional organization chart for upgrading weapons

- Functional description of upgraded weapons flow-process charts and flow-process diagrams

The development of flow plans will not ensure that an activity is capable of producing the mines required to support mine warfare operation plans. To examine a MOMAG activity's readiness and realistic response capability for possible mining requirements, each MOMAG activity must conduct a Quarterly Readiness Assessment. The assessment will be conducted using sufficient assets to sustain peak weapon assembly proficiency for all weapons types maintained on board or the weapons types the unit/detachment has the capability to assemble. Although two readiness assessments per year may be walk-throughs to examine and evaluate new ideas or changes in assembly flow plans, one readiness assessment each year must exercise and verify line resupply procedures. Emphasis will always be placed on weapon reliability and safety during all evolutions. A post analysis will be performed with the results being used by the CO/OIC to evaluate and correct assembly errors. The basic procedures to be followed during an upgrade exercise are outlined in COMOMAGINST 3501.1, *Quarterly Mine Readiness Upgrade*. In addition, the instruction provides the minimum mine production rates that must be maintained during the upgrade exercise.

UNIFORM MINE WARFARE PLANNING SYSTEM

At this point in your career, you probably realize that planning for an operation involves a great deal more than just designing the end product. Planning for a minefield is even more involved. The designer's efforts are dwarfed by the actions of the overall planning and scheduling involved in the total aspect of a minefield; still, the minefield design is the core of the plan. If the design is not adequate, the whole operation may be a waste of time, money, and assets. It is also true that if the design is excessive, the operation will be too costly in assets and logistics. It is for these reasons that the Uniform Mine Warfare Planning System (UMWPS) was designed.

Under UMWPS, the world has been subdivided into minefield planning folder areas, and each area has been assigned a numerical designation as outlined in *Minefield Planning Folder* publications have been developed by COMINEWARCOM to aid in mine warfare operations. One such publication is known as *Mine Setting Sheet Folder (MSSF)*. MSSFs are issued for the Atlantic, Pacific, and European areas. Each MSSF, which is produced to aid mine assembly activities, contains computer-printed mine-setting sheets (MSSs) for specific geographical areas. The MSSs list the types of mines, quantity of mines, and the operational settings for specific minefields within the geographical area.

In conjunction with MSSs, all mines consigned for combat use are assigned mine control numbers (MCNs), which are designators that comprise a minefield number (four digits), a minefield segment designator (an alpha character), and a mine case number (one to four digits). Among other things, MCNs reflect that all mines in a minefield are not identical. Generally, more than one type of mine (mark/mod) is specified. Also, operational settings, even among mines of like mark and mod, may have purposeful differences. The control numbers index such operational knowledge. The numbers are derived with reference to minefield planning folders, which locate the minefield and segment and list the mark and mod, operational assembly (OA), operational settings, and other operational data for the mine. During mine assembly procedures, the assigned MCN is stenciled adjacent to the arming-device well on each mine case.

Additional information concerning UMWPS and related publications is contained in MFPF-00 and in Naval Warfare Publication (NWP) 27-4, *Mining Operations*.

READINESS REPORTS

At times, situations will arise that require the submission of special reports on incidents that could effect the status of your command. A mishap involving a serious impact on a command's combat readiness posture or peacetime mission capability may require special reports in conjunction with or in place of other reports.

There are two special incident reports that you, as a supervisor, will be concerned with. OPREP-3 (NAVY BLUE series) and Unit Situation Reports (UNIT SITREPS).

OPREP-3

OPREP-3 should be submitted by the lowest-

other naval commanders with immediate notification of incidents of military, political, or press interests that are of high Navy, vice national, interest. These reports are submitted to provide "as it happens" information on the following types of incidents:

- Instances of misconduct that may be reported by the local news media
- Significant damage to civilian property resulting from actions of members of the Department of the Navy
- Acts or attempts to willfully destroy property of the U.S. Navy
- Bomb threats that are evaluated by the reporting officer as probably valid
- Disorders or natural disasters of minor significance if naval assistance is provided or requested
- Fires, flooding, explosions, collisions, groundings, or other accidents to naval units

UNIT SITUATION REPORT (SITREP)

The UNIT SITREP is used by unit commanding officers, officers-in-charge, or other commanders (as directed or appropriate) to provide appropriate operational commanders and higher authority with timely notification of any incident not meeting OPREP-3 special-incident reporting criteria. A UNIT SITREP must be submitted under the following circumstances:

- When directed
- When considered appropriate by the reporting activity
- When bomb threats have been evaluated as a hoax

This list is not all inclusive, and reference to **OPNAVINST 3100.6** will be required for assistance in completing these two reports.

OPERATIONAL REPORTS

Operational reports are the main channel of information from the operating forces of the Navy to the Chief of Naval Operations. They are used to provide a complete review of the major aspects of naval warfare. Some information provided by these reports is as follows:

1. Evaluation of combat readiness
2. Evolutions and innovations in naval warfare
3. Detection of imbalances in material and logistic support

CASUALTY REPORTS (CASREPS)

CASREPS are used to report significant equipment casualties within the Navy establishment. The CASREP has been designed to support the CNO and fleet commanders in the management of assigned forces.

A *casualty* is defined as an equipment malfunction or deficiency that cannot be corrected within 48 hours and that

1. reduces the unit's ability to perform a primary mission,
2. reduces the unit's ability to perform a secondary mission, or
3. reduces a training command's ability to perform its mission or significant segment of its mission.

There are four types of CASREPS; they are submitted using a combination of two or more messages, depending on the situation. The four types of CASREPS are Initial, Update, Correct, and Cancel.

Along with the four types of CASREPS, there are four categories associated with each report. The category reflects the urgency or priority of the casualty. All ships, shore activities, and overseas bases use only three casualty categories (2, 3, 4), and NAVEDTRACOM activities use all four categories (1, 2, 3, 4).

NWP-10-1-10 provides guidance on message formats, text structure of the message, and classification.

STATUS OF RESOURCES AND TRAINING SYSTEM (SORTS)

The SORTS report is the principal report within the U.S. Navy. It provides identification and general status to the National Command Authority (NCA), the Joint Chiefs of Staff (JCS), the Chief of Naval Operations (CNO), the Fleet Commanders-in-Chief, and other operational commanders.

SORTS reports will be submitted as frequently as necessary

1. to maintain an accurate picture of unit status;
2. to reflect any additions, changes, and deletions;
3. to keep previously submitted status attainment dates from expiring; and
4. upon request of the NCA, JCS, CNO, or fleet commander-in-chief.

SORTS reports must be submitted as soon as possible but no later than 4 hours following any addition, change, or deletion to a unit's status. **DO NOT** collect and save data for a later transmission.

When a SORTS report is submitted it will contain as a minimum the following information, with data labels:

1. Present geographic location (PRGEO)
2. Commanding officer (COMDR)
3. Current activity and employment (ACTIV)
4. Personnel strength (PERSN)

NWP 10-1-11 provides the only status-reporting instructions to be used by units for maintaining SORTS records in the Navy Status of Forces (NSOF) data base. Additional instructions, limited to fleet commanders-in-chief and type commanders, may amplify, but must not be in conflict with or modify, the guidance and format provided in NWP 10-1-11.

NOTE

The reports listed in this section are not meant to be all inclusive. Certain occurrences, events, and situations are exempted from these requirements. Be sure you check all current instructions for specific guidance concerning your reports.

MINE ASSEMBLY TRAINING

From the time you completed your class A school and reported to your first command, you have experienced numerous evolutions involving mine upgrade training and inspections. Now, as the supervisor, you should understand why this was done.

At any time, you and your crew could be called upon to perform the tasks for which you have been trained, so you must be ready to operate under wartime situations. To be able to work under strenuous and sustained operations, your people must be trained so that they are capable of performing their duties. From mine upgrade and movement of weapons to the final preparation and deployment, it is now your job to make sure the required training is given. The following section will discuss some aspects of mine assembly training.

PERSONNEL QUALIFICATION STANDARD (PQS) PROGRAM

The PQS program is a qualification system for officer and enlisted personnel to perform certain duties. Although this program is not designed as a training program, it does provide many training objectives. The PQS for the Mineman rating (NAVEDTRA 43318) is a collection of the minimum knowledge and skills required to qualify for a specific watchstation, maintain specific equipment, or perform as a team member within a unit. The PQS booklet is formatted in three sections. The first two sections are used as steps to the final qualification sign-off. The format is as follows:

1. 100—Fundamentals. This section identifies basic knowledged required to perform the job properly.
2. 200—Systems. This section covers the functional systems such as components and subassemblies.
3. 300—Watchstations/Workstations. This section contains the required procedures for performing specific jobs.

Your personnel should be qualified as soon as possible, since you, as a senior petty officer, will be required to assign these junior personnel to perform specific jobs. It is important that you have a way of keeping track of the personnel who need certain PQS's signed off; who is and who is not progressing in his or her PQS sign-off; and who needs counseling or individual instruction. By using the PQS progress chart, you can track each individual assigned to your department.

The PQS progress chart is maintained by individual supervisors and is reviewed weekly by the division officer. The chart should accurately reflect the PQS point system in tracking the trainees' progress (fig. 3-1).

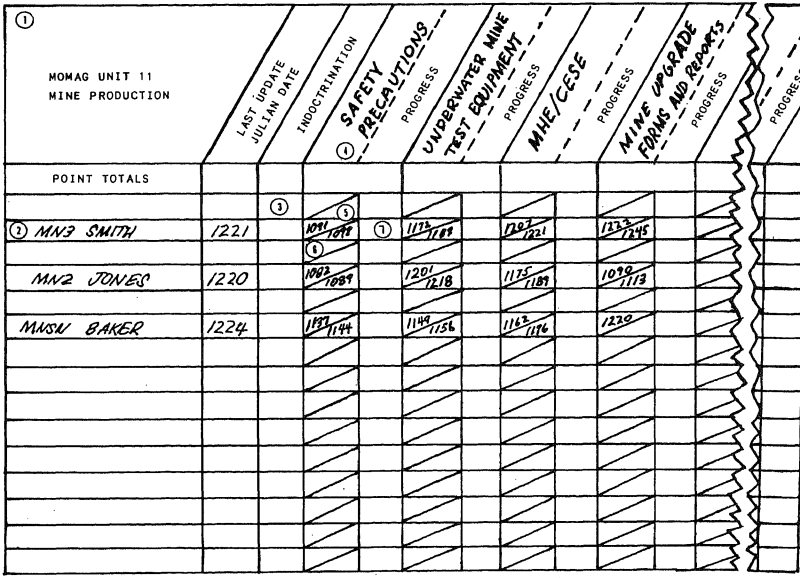

Figure 3-1.—PQS Qualification Progress Record.

The PQS progress chart should contain the following information:

1. Command name, division/workcenter
2. Trainees by name rank and rate
3. Date the trainee completed command indoctrination
4. Watchstation, by name and number
5. Date the trainee commenced on a particular qualification
6. Anticipated completion date
7. Trainee's progress

The PQS program cannot survive unless you plan effectively and maintain control.

ON-THE-JOB TRAINING (OJT)

On-the-job training (OJT) is the most common training you will provide for your personnel. OJT is an informal training used for one-on-one instruction with your crew. OJT allows you to cross-train your personnel in all aspects of shop operations and the various jobs involved in completing a mine upgrade.

Although OJT is an informal training and documentation is not required, you should keep track of OJT in your own records so that you will be able to follow the progress of your personnel and be able to make good judgments as to job assignments.

COMMAND INSPECTION PROGRAM

All naval activities are inspected periodically to determine their state of proficiency. The objectives of such inspections are (1) to evaluate the effectiveness of the command in performing

its assigned tasks; (2) to determine whether quantity, quality, and management of available resources are adequate to perform assigned functions; (3) to evaluate the effect of administrative or resource deficiencies on the command's ability to function properly; and (4) to determine appropriate corrective actions.

Inspections bring to light incorrect or improper practices or unsatisfactory conditions which cannot be minimized. Inspections should not be considered as fault-finding operations. Inspections are conducted to point out existing discrepancies and to suggest methods for improving readiness, effectiveness, efficiency, responsiveness, and economy. Commendable conditions and praiseworthy accomplishments should be noted and commented on. Innovations or techniques used by a command to improve operating techniques, maintenance procedures, utilization of resources, and administrative procedures should also be noted and disseminated.

DEFINITIONS OF INSPECTIONS

In its broadest sense, the term *inspection* includes not only command inspections but also the efforts of all inspection authorities within the Department of the Navy who periodically evaluate commands. Inspections are subject to general supervision, general guidance, and coordination by the Naval Inspector General (NAVINSGEN). In general, specific appraisal action terms concerning inspections are defined as follows:

Inspection. An inspection is a critical, official, and formal examination of the personnel and/or material of a command to determine its condition or how effectively it can perform the assigned mission. The examination is imposed by higher authority and is conducted or sanctioned by the chain of command. The results of the examination are reported to higher authority, and a follow-up system is involved to ensure that problem areas have been resolved.

Certification. A certification is an examination of material or personnel to endorse them officially as being of the desired quality.

Request Assist Visit. A request for assist visit is a critical and official, but informal examination of personnel/material. The assist visit is used to determine the condition of the unit and how effectively it can perform the assigned mission. This type of examination is made at the request of the commanding officer/officer in charge. However, an assist visit may also be requested by organizations within or outside the chain of command. If a senior in the chain of command directs that an assist visit be made and requires a report of the results, the examination must be considered a formal examination.

Audit. An audit is an examination of records or accounts. An audit may be part of an inspection or an inspection in itself for purposes of the Naval Command Inspection Program. This audit should not be confused with internal audits conducted by the Naval Audit Service.

Follow-up. A follow-up is the process of ensuring that a command is taking adequate action on an approved recommendation contained in an inspection or audit report.

NAVAL COMMAND INSPECTION PROGRAM

The Naval Command Inspection Program includes the basic requirements and guidelines for command inspections applicable to all activities of the Shore Establishment, the Operating Forces of the Navy, and portions of the Navy Department commanded by the Chief of Naval Operations.

The basic concept of the Naval Command Inspection Program is that inspections of subordinate commands and units are conducted periodically by the immediate superior in command (ISIC) or the immediate unit commander (IUC). When both administrative and operational commanders are involved, the inspection responsibility is that of the administrative ISIC/IUC.

OPNAVINST 5040.7, *Naval Command Inspection Program*, establishes the objectives and policies of the Naval Command Inspection Program and assigns responsibility for it. The instruction also prescribes procedures for the preparation, conduct, reporting, and follow-up of inspections conducted under the Naval Command Inspection Program.

MINE WARFARE INSPECTIONS

There are many types of inspections with which you may become involved. They will range from personnel inspections to zone inspections conducted by your command, and from administrative inspections to operational readiness

inspections conducted by higher authority. Although each type of inspection concerns the effectiveness of a command, this section discusses only some of the inspections conducted by COMINEWARCOM and COMOMAG.

As outlined in COMOMAGINST 5040.1, *Inspection Guide for MOMAG Units/Detachments Command Inspections*, and COMOMAGINST 5040.7, *Internal Review of Supply and Financial Management*, COMOMAG command inspections examine a command's ability to accomplish its assigned mission in the following areas:

General. Evaluates the command's mission, functions, tasks, resources, and management (including personnel, facilities, equipment, supplies, training, and funding); the command's coordination with other commands; the effectiveness of the command's plans and current operations; the command's planning for contingency operations; and known deficiencies or problem areas within the command

Administrative. Determines whether the organizational and administrative methods and procedures set forth by higher authority are being adhered to and directed toward maximum readiness

Supply. Determines whether the supply section of the command is effectively carrying out the assigned mission and tasks in accordance with directives set forth by higher authority

Material/Maintenance. Determines the condition and adequacy of material-handling equipment (MHE), machinery, facilities, and other equipment

Items of Special Interest. Checks other general or technical areas of particular interest to COMOMAG

In addition to the above areas, a COMOMAG command inspection may check the following:

- Appearance, bearing, and smartness of personnel
- Cleanliness, sanitation, smartness, and appearance of the command
- Adequacy and condition of personnel clothing and equipment
- General knowledge of personnel in regard to the command's organization, regulations, orders, and administrative procedures
- Dissemination of information within the command
- Indoctrination of newly reported personnel
- General educational facilities for personnel
- Comfort and conveniences of living spaces
- General military training (GMT) and on-the-job training (OJT) programs
- Assignment of personnel to work areas, watches, and special duties
- Proper posting of operating instructions and safety precautions
- Proper maintenance of stockpiled weapons and associated equipment and upkeep of maintenance records

Mine Readiness Certification Inspection

Just as an operational readiness inspection (ORI) evaluates the readiness and capability of a ship to perform its assigned mission under wartime conditions, a Mine Readiness Certification Inspection (MRCI) evaluates the capability of a MOMAG activity to assemble mines under the same conditions.

The Commander, Mine Warfare Command is tasked, by the Chief of Naval Operations (CNO), with assessing and assuring mine warfare (MIW) readiness throughout the U.S. Navy. To accomplish this task, the Commander, Mine Warfare Inspection Group (COMINEWARINSGRU), under the direction of COMINEWARCOM, conducts or assists in conducting MIW certification inspections of all commands or units assigned MIW missions. The inspections are conducted in accordance with OPNAVINST C5040.15, *Mine Warfare Readiness Certification Inspection*. These certification inspections are scheduled and conducted in an operational environment, permitting realistic assessments and evaluations of a command's operational readiness with respect to its mine warfare techniques, procedures, tactics, doctrine, training, and resources management.

Mine warfare inspections for certification are conducted at MOMAG activities at intervals considered appropriate by FLTCINCs but not exceeding 24 months. When an inspection team arrives, a letter of instruction (LOI) is presented to the commanding officer/officer in charge to prepare specific mines assigned to that activity's stockpile. The activity is then evaluated with respect to its procedures involving the upgrade operations of the designated mines. Upon completion of the assembly aspect of the inspection, a post-analysis is conducted on the mines to check the effectiveness of procedures and the operating efficiency.

In addition to evaluating a command's upgrading operations and capabilities, the inspection team may also check the following areas:

- Personnel, material, and supply management
- Training programs
- Security
- Facilities

Assist Visit

Informal assist visits are conducted by COMINEWARINSGRU on an "as requested" and "as available" basis. Assist visits are designed to fulfill the needs of the requesting activity, and may be Intra-Theater. An assist visit should be scheduled and conducted on the requesting site by a team from another site as designated by COMOMAG and should occur during a scheduled Quarterly Readiness Assessment. Specific areas of concern during an assist visit may be personnel or supply management, mine assembly procedures or capabilities, facility requirements, and so forth.

INSPECTION PREPARATIONS

An inspection should not take your command by surprise. The best preparation for an inspection is to perform daily work assignments and requirements *without errors*. Preparation for the next inspection actually begins the day the last inspection ends. You are required to correct any discrepancies noted during an inspection as soon as possible. Some of these discrepancies may be corrected immediately, whereas others may take time, because of administrative or logistic situations. In addition, you should review and take into consideration any recommendations submitted by the inspection team, regardless of whether the recommendations are official or unofficial.

When you are preparing for an inspection, check the results from the last inspection. The last inspection report is a logical place to start, not only because it will be checked by the inspecting officer but also because it points out former weaknesses in the command. Make sure all discrepancies have been corrected or acted upon. If any discrepancies have not been corrected, make a note as to why; the inspectors will inquire about them.

Another source of information for the preparation of inspections is inspection checklists or guides. Although primarily intended for COMOMAG command inspections, COMOMAGINST 5040.1 and COMOMAGINST 5040.7 each provide a list of areas that may also be checked during a mine warfare certification inspection or assist visit. OPNAVINST C5040.15, *Mine Warfare Readiness Certification Program*, provides a chart of the general areas to be inspected during an MRCI.

As a Mineman, you are considered the professional source concerning operations involving the assembly, handling, and maintenance of mines and associated equipment. However, since the Mineman rating involves more than just working with mines, you should contact personnel from other ratings or areas for assistance in preparing for an inspection. A Yeoman may suggest a more efficient way of performing administrative matters, and a Storekeeper could tell you if your basic supply procedures are within NAVSUP-SYSCOM's requirements. In addition, you can conduct your own preinspection within the command. Personnel from one division of the command could inspect another division, specific area, or operation.

Two important factors to remember are

- DO NOT wait until the last minute to prepare for an inspection. That is usually too late.
- DO NOT rely on your own self-check in areas for which you are normally responsible. You may be doing a task or procedure wrong in the first place.

Finally, remember that the most important task of Minemen is to prepare mines in support of mine warfare operations.

SUMMARY

The mission of a MOMAG activity is to maintain operational mines in an assembly configuration that permits rapid upgrade and delivery to the planting vehicle. You must be ready on short notice to build and deliver a quality product to the delivery vehicle.

To accomplish this mission, you the supervisor must ensure that your personnel are capable and well trained in all functions required for mine production and processing. Training is the key. Practice upgrades and inspections also go hand in hand in making sure all personnel are capable of performing their jobs and operating as a team to accomplish the command's mission.

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Personnel Qualification Standard for Underwater Mine Assembly Upgrade, NAVEDTRA 43318, Naval Education and Training Support Center, Pacific, San Diego, Caiif., August 1986.

CHAPTER 4

SUPPLY PROCEDURES

As a supervisor, in addition to simply forwarding material requests to the supply division, you will now be required to screen all material requests to make sure that the material is

- necessary and supports your command's functions;
- within the command's allowance requirements; and
- within the command's budget limitations.

You may also be required to assist supply personnel in preparing specific reports, conducting inventories, and determining priorities for requisitions.

Supply personnel cannot do the whole job of requisitioning material. They must first know your requirements and then whether or not the material is authorized for use. You, as the supervisor, should have a good understanding of the procedures required for the procurement of material through the Navy supply channels. It is quite possible that at some future time you will be in charge of the supply department. Therefore, understanding the procedures, forms, and proper record-keeping techniques will be beneficial to you and your command.

This chapter is not intended to make you an expert in supply matters. Rather, it is designed to give you a basic understanding of supply matters, to improve your supervisory abilities, and to provide a better understanding of and relationship with the supply division.

Upon completion of this chapter, you will be able to discuss and explain the procedures for material identification, procurement, receipt, custody, stowage and disposition. You will also be able to discuss the responsibilities of inventory

MATERIAL IDENTIFICATION

Before you can order and receive material, it must be properly identified. The problem of material identification is not peculiar to the Navy or to any specific military branch. You have probably had experiences of purchasing a part for your car at a store or of using a mail order catalog; such items are identified by a catalog or part number. That catalog or part number is the material identification system used by the manufacturer or supplier, and it is used for the same reason the Navy uses one: to provide a brief and accurate means of identifying specific items of material.

There are over 4 million items in the Department of Defense Supply System. The Navy Supply System alone stocks over 1 million items. Your unit or detachment stocks hundreds, maybe thousands, of items. A common method and language have been developed for properly requisiting a specific item and ensuring expedient delivery of the item requested. In this section we discuss proper item identification and classification, which are essential to the receipt of the correct material.

FEDERAL SUPPLY CLASSIFICATION (FSC) SYSTEM

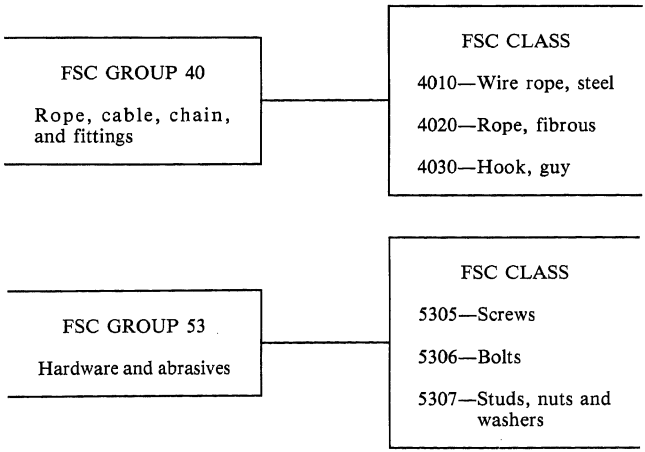
The Federal Supply Classification System is designed to permit the classification of all items of supply used by the Federal Government. Each item is classified in one, and only one, four-digit class. The first two digits denote the group or major category of commodities. The last two digits denote the class or subdivision within a group. Currently, the FSC consists of 81 groups (some unassigned). The groups cover a broad range of categories and are further broken down

assigned to the 81 groups. The groups are as follows:

Group	Title
10	Weapons
11	Nuclear ordnance
12	Fire control equipment
13	Ammunition and explosives
14	Guided missiles
15	Aircraft and airframe structural components
16	Aircraft components and accessories
17	Aircraft launching, landing, and ground handling equipment
18	Space vehicles
19	Ships, small craft, pontoons, and floating docks
20	Ship and marine equipment
21	Unassigned
22	Railway equipment
23	Ground Effect vehicles, motor vehicles, trailers, and cycles
24	Tractors
25	Vehicular equipment components
26	Tires and tubes
27	Unassigned
28	Engines, turbines, and components
29	Engine accessories
30	Mechanical power transmission equipment
31	Bearings
32	Woodworking machinery and equipment
33	Deleted
34	Metalworking machinery
35	Service and trade equipment
36	Special industry machinery
37	Agricultural machinery and equipment
38	Construction, mining, excavating, and highway maintenance equipment
39	Materials-handling equipment
40	Rope, cable, chain, and fittings
41	Refrigeration, air conditioning and air circulating equipment
42	Fire-fighting, rescue, and safety equipment
43	Pumps and compressors
44	Furnace, steam plant, and drying equipment, and nuclear reactors
45	Plumbing, heating, and sanitation equipment
46	Water purification and sewage treatment equipment
47	Pipe, tubing, hose, and fittings
48	Valves
49	Maintenance and repair shop equipment
50	Unassigned
51	Hand tools
52	Measuring tools
53	Hardware and abrasives
54	Prefabricated structures and scaffolding
55	Lumber, millwork, plywood, and veneer
56	Construction and building materials
57	Unassigned
58	Communication, detection, and coherent radiation equipment
59	Electrical and electronic equipment components
60	Fiber optics, materials and components
61	Electric wire, and power and distribution equipment
62	Lighting fixtures and lamps
63	Alarm and signal security detection systems
64	Unassigned
65	Medical, dental, and veterinary equipment and supplies
66	Instruments and laboratory equipment
67	Photographic equipments
68	Chemicals and chemical products
69	Training aids and devices
70	General-purpose automatic data processing equipment (including firmware), software, supplies, and support equipment
71	Furniture
72	Household and commercial furnishings and appliances

Group	Title
73	Food preparation and serving equipment
74	Office machines, data processing equipment, and visible-record equipment
75	Office supplies and devices
76	Books, maps, and other publications
77	Musical instruments, phonographs, and home-type radios
78	Recreational and athletic equipment
79	Cleaning equipment and supplies
80	Brushes, paints, sealers, and adhesives
81	Containers, packaging, and packing supplies
82	Unassigned
83	Textiles, leather, furs, apparel, and shoe findings, tents and flags
84	Clothing, individual equipment and insignia
85	Toiletries
86	Unassigned
87	Agricultural supplies
88	Live animals
89	Subsistence
90	Unassigned
91	Fuels, lubricants, oils, and waxes
92	Unassigned
93	Nonmetallic fabricated materials
94	Nonmetallic crude material
95	Metal bars, sheets, and shapes
96	Ores, minerals, and their primary products
97	Unassigned
98	Unassigned
99	Miscellaneous

The number of classes in each group varies. Each class covers a particular area of commodities, depending on their physical or performance characteristics, or whether the items in the class are usually requisitioned or issued together. Examples of how the classes are used to divide types of material within a stock group are shown in figure 4-1.



The stock group and the class together are known as the Federal Supply Classification (FSC).

NATIONAL STOCK NUMBER (NSN)

A National Stock Number (NSN) is a 13-digit number assigned by the Defense Logistics Services Center (DLSC) to identify an item in the supply distribution system. It consists of a four-digit federal supply classification (FSC), and a nine-digit national item identification number (NIIN).

The NIIN consists of a two-digit national codification bureau (NCB) code and seven digits. When the NCB code and the seven digits are used together, they will identify each NSN in the federal supply distribution system. See figure 4-2.

TECHNICAL MANUAL IDENTIFICATION NUMBERING SYSTEM (TMINS)

The Technical Manual Identification Numbering System is a plan for classifying, indexing, and numbering Navy technical manuals, which has been developed to encourage standardization and modernization. The 13-character alphanumeric system is patterned after the 13-digit national stock number and serves as a technical manual identification number and as the number used to requisition technical manuals.

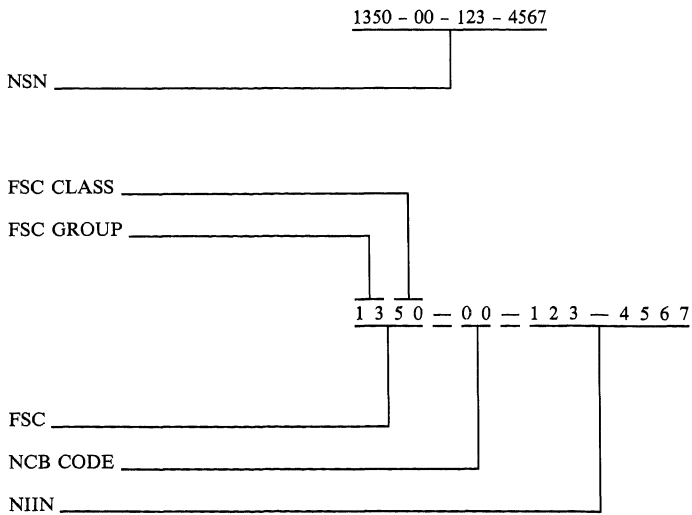
The 13 characters are called a publication identifier. It is divided into two sections (fig. 4-3). These two sections are called the Hardware/Subject Identifier, which contains seven alphanumeric characters, and the Technical Manual Identifier, which contains six alphanumeric characters. These two sections are further divided as follows:

Hardware/Subject Identifier

Block 1, Cognizant Command (COG COMM): Indicates the system command that has control of the publication (NAVSEA, NAVAIR, NAVELEX)

Blocks 2 through 5, Standard Subject Classification Code (SSCC): Identifies the general classification of the subject matter or the commodity

Blocks 6 and 7, Subject Serial: Assigned by the cognizant command during the early stages of development or procurement for subject identity



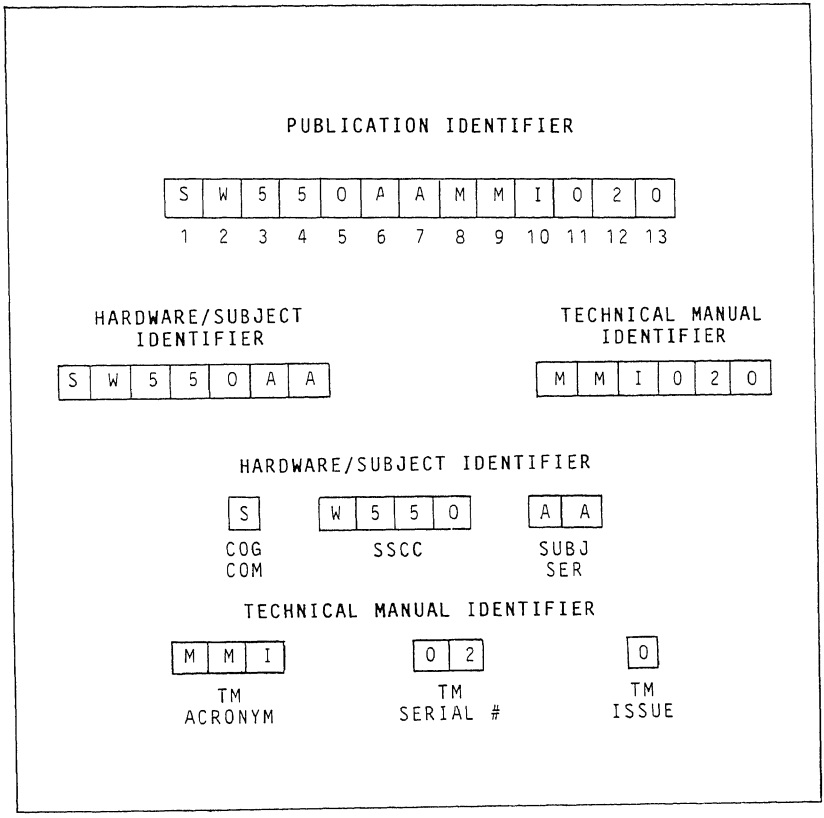


Figure 4-3.—Elements of a TMINS.

Technical Manual (TM) Identifier

Blocks 8 through 10, TM Acronym: Identifies the type of manual (MMI maintenance manual, intermediate level; MMM maintenance manual, organizational and intermediate level, etc.)

Blocks 11 and 12, TM serial number: Identifies a specific manual or separately bound part of the manual.

Block 13, TM issue: Identifies the basic TM or changes.

For further clarification, see the examples in figure 4-3. Those examples show this manual to be under the COG of NAVSEA (S), related to Weapons (W) in general, and Underwater mines (550) in particular. It also shows the subject serial (AA) assigned by NAVSEA, that it is a maintenance manual for use at the intermediate level (MMI), and that it is the second (02) volume of the basic issue (0).

MISCELLANEOUS SOURCES OF IDENTIFICATION

To help identify certain technical material, the manufacturer, responsible bureau, or Systems Command responsible for the material may serially number items for use in maintaining records, vouchers, custody cards, and for survey reports. Other sources to help identify materials are catalogs and instruction books, drawing numbers, and name plates. These items and some Navy publications are described in the following paragraphs.

Commercial Catalogs and Instruction Books

Commercial catalogs and instruction books or pamphlets are issued by the manufacturer and contain information that of value in procuring non-standard material.

Name Plates

Portable and installed equipment may have nameplates attached to aid in the procurement of parts. The information provided on nameplates includes the manufacturer's name, make or model number, serial number, size, voltage, and so forth.

Drawing Numbers

Certain technical materials are identified by a drawing or sketch number assigned by the controlling bureau or systems command or by the manufacturer. This number will assist in requisitioning non-standard items.

Management List—Navy

The Management List—Navy, published on microfiche, is the basic publication relating to national stock number (NSN) data. It is published in national item identification number (NIIN) sequence and includes only items for which Navy interest has been recorded.

Master Cross-Reference List

The Master Cross-Reference List (MCRL), published on microfiche in two parts, provides cross-reference information from reference numbers to national stock numbers (NSN) in part 1, and from NSN to reference numbers in part 2.

The MRCL is a consolidated publication and includes items of supply that are used by all services. Therefore, many NSNs will be identified that you would not find listed in the ML—N.

The use of the above listed resources will help to get you started in the identification of materials. This is not meant to be all inclusive. Your use of NAVSUP P-485, chapter 2 is almost mandatory for material identification.

PROCUREMENT

Each activity is responsible for spending the money made available to it in the most effective way. Although the money is not actual cash, it is available through specific allocated funds or accounts. As a supervisor, you must make sure that financial obligations made by your command are necessary and are not wasted or misappropriated. The ultimate use of an item must be considered, since generally this determines which fund must be used. For example, paint for mines must be obligated against mine maintenance funds, and paint requisitioned for painting an office must come from the OPTAR funds.

Procurement is the act of obtaining materials or services, using the appropriate funds, by requisition or purchase. The most frequently used of these two is the requisition. The purchase is used for procurement of non-standard material and for emergency requirements. A careful review of each obligation must be made to ensure that all funds are applied correctly.

TYPES OF FUNDS

COMOMAG receives administrative funds from COMINEWARCOM and provides each MOMAG activity with funds each quarter. MOMAG activities are normally provided with two types of funds: operating target (OPTAR), and operations and maintenance, Navy (O&MN). Occasionally, an activity may be granted a separate or special-fund allocation. When this occurs, COMOMAG will provide specific instructions concerning the use and obligation of the special fund.

Fleet commanders are responsible for funding operational costs associated with MOMAG activities. This includes mine material movement/handling support and travel associated with

fleet exercises. Operational funding support from the fleet commanders is passed to the MOMAGs in various ways; often by way of reimbursable orders, sometimes through the host activity and, in the case of travel, direct allocation.

OPTAR FUNDS

OPTAR funds are allocated for general site support. This support includes items necessary for the day-to-day support of the activity but not for the direct support of mines, mine components, and mine maintenance. Examples of OPTAR expenditures include the following:

- Cleaning equipment
- Office supplies
- Utilities
- Copy machine rental fees

MAINTENANCE FUNDS

O&MN funds are provided for procurement of NSA (chargeable) mines, mine components, and mine-maintenance-related material. The O&MN funds must be obligated for material in direct support of mine material or maintenance.

O&MN funds are commonly referred to as mine maintenance funds. Examples of O&MN expenditures include the following:

- Paint and associated equipment
- Handtools
- Protective clothing
- Materials-handling equipment and vehicles

MILITARY STANDARD REQUISITIONING AND ISSUE PROCEDURES (MILSTRIP)

The Military Standard Requisitioning and Issue Procedures (MILSTRIP) is used to order material from the Navy supply system, other military installations, the Defense Logistics Agency, and the General Services Administration.

MILSTRIP DOCUMENTS

The following forms are the most common ones you will use in the mine force. For more detailed information, refer to COMOMAG-INST 4000.1 and NAVSUP P-485.

- **DD 1348** 4 or 6 part. This form is used for requisitioning standard stock items (NSN or NICN) that are chargeable to OPTAR or Mine Maintenance, Appropriation Purchase Account (APA) material or publications (fig. 4-4).

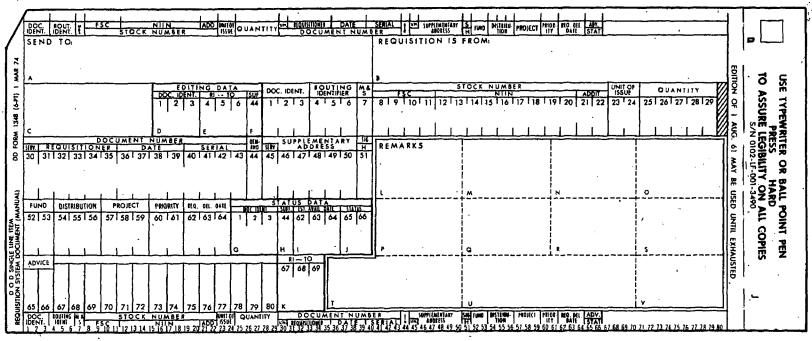

SEND TO:
REQUISITION IS FROM:
STOCK NUMBER
DOCUMENT NUMBER
REMARKS
USE TYPEWRITER OR BALL POINT PEN PRESS HARD TO ASSURE LEGIBILITY ON ALL COPIES

Figure 4-4.—DD Form 1348 (4 or 6 Part).

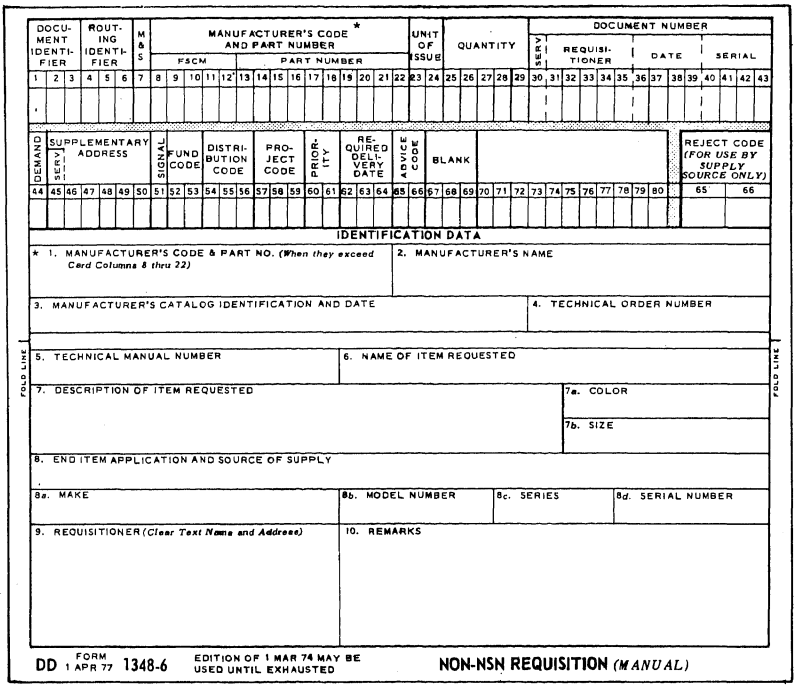
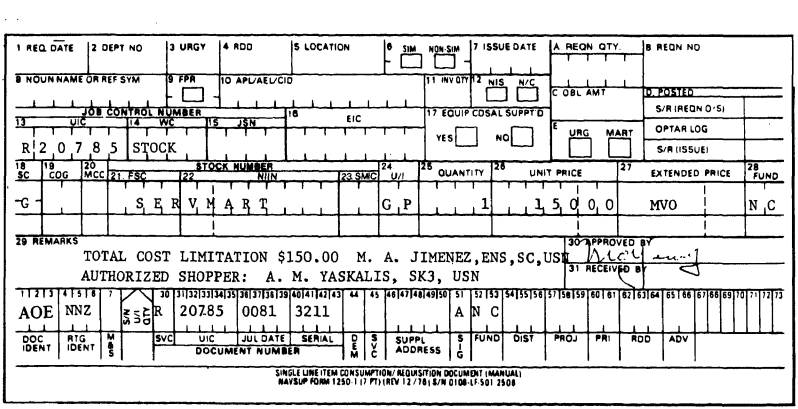


Figure 4-5.—DD Form 1348-6.



- **DD 1348-6.** This form is used for requisitioning non-standard items (NON-NSN), either chargeable or non-chargeable. Be sure to provide all the data that is required (fig. 4-5).

- **NAVSUP 1250-1.** This form may be used for requisitioning standard stock items (NSN-NICN) that are chargeable to OPTAR or Mine Maintenance, Appropriation Account (APA) material if the supporting activity will accept it. It may not be used to order publications (fig. 4-6).

- **DD 1149.** This form is preferred by some remote/overseas activities for requisitioning non-standard items. However, the DD 1348-6 is the proper form to use. Keep the use of the DD 1149 to a minimum (fig. 4-7).

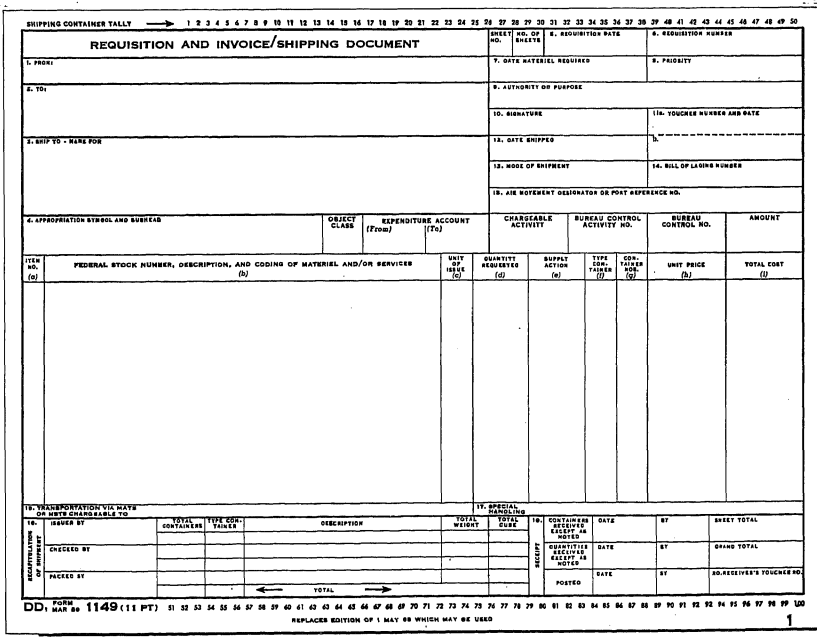
OTHER REQUISITIONS

Other services provided through the supply system require the use of different types of forms or letters. These services are usually provided locally, and the use of the forms listed is required:

- **DD 282.** This form is used for ordering printing services from supply activities. An obligation document (DD 1348) will be prepared as required by NAVSUP P-485.

- **NAVCOMPT 2275.** This form is used to order work and services. It is to be used where required by MOMAG Units/Detachments for chargeable services such as utilities, transportation, equipment rental, or any other specific request for routine or emergency services. Refer to COMOMAGINST 4000.1 for details.

- **Letter Requisitions.** Occasionally, a piece of equipment or part for an underwater mine will not have an assigned stock number. This indicates that the material is not generally available for intermediate-level or depot-level use. The


SHIPPING CONTAINER TALLY → 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

REQUISITION AND INVOICE/SHIPPING DOCUMENT

SHEET NO. | NO. OF SHEETS | 5. REQUISITION DATE | 6. REQUISITION NUMBER

1. FROM:
7. DATE MATERIEL REQUIRED | 8. PRIORITY

2. TO:
9. AUTHORITY OR PURPOSE

10. SIGNATURE | 11a. VOUCHER NUMBER AND DATE | b.

3. SHIP TO - MARK FOR
12. DATE SHIPPED

13. MODE OF SHIPMENT | 14. BILL OF LADING NUMBER

15. AIR MOVEMENT DESIGNATOR OR POST REFERENCE NO.

4. APPROPRIATION SYMBOL AND SUBHEAD | OBJECT CLASS | EXPENDITURE ACCOUNT (From) (To) | CHARGEABLE ACTIVITY | BUREAU CONTROL ACTIVITY NO. | BUREAU CONTROL NO. | AMOUNT

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIEL AND/OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NO. (g)	UNIT PRICE (h)	TOTAL COST (i)

16. TRANSPORTATION VIA MAYB OR MBTB CHARGEABLE TO

17. SPECIAL HANDLING

18.	ISSUED BY	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
SHIPPING INSTRUCTIONS	CHECKED BY					
	PACKED BY			← TOTAL →		

19.	CONTAINERS RECEIVED EXCEPT AS NOTED	DATE	BY	SHEET TOTAL
RECEIPT	QUANTITIES RECEIVED EXCEPT AS NOTED	DATE	BY	GRAND TOTAL
	POSTED	DATE	BY	20. RECEIVER'S VOUCHER NO.

DD, FORM MAR 80 1149 (11 PT) 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

REPLACES EDITION OF 1 MAY 68 WHICH MAY BE USED

requirement for such items should be referred to NAVMINEWARNGRACT by letter VIA COMOMAG, explaining the circumstances and justifying the actual need for the item.

SUBMISSION OF REQUISITIONS

Requisitions for material must be submitted to various stocking points, depending on the items required. Procedures for the submission of requisitions can be found in NAVSUP P-485 and COMOMAGINST 4000.1.

MESSAGE AND DEFENSE AUTOMATIC ADDRESSING SYSTEM (DAAS)

Message/DAAS requisitions should be used to the maximum extent possible. Ship's Parts Control Center (SPCC) has requested that DAAS be used when requisitioning ammunition, since it expedites SPCC processing.

Anytime a message or DAAS is used, a DD Form 1348 should be typed with the Date Time Group of the message in the Remarks section and placed in the files for record purposes.

UNIFORM MATERIAL MOVEMENT AND ISSUE PRIORITY SYSTEM (UMMIPS)

An essential part of MILSTRIP is the requirement to assign priorities in accordance with set standards of the Uniform Material Movement and Issue Priority System (UMMIPS). When material is requisitioned, moved, or issued, it is necessary to set a common basis of determining the importance of competing demands for resources in the logistics systems. Such resources include material assets, requisition processing, transportation priorities, and storage. The method used for expressing the military urgency of a requirement is the priority designator (PD). The PD is assigned to a requisition to determine the time that the requirement will be processed by the supply system. The priority designator is determined by the requisitioner's assigned Force/Activity Designator (F/AD) and the proper Urgency of Need Designator.

Force/Activity Designator (FAD)

The Force/Activity Designator (F/AD) is a roman numeral assigned to identify and categorize a force or activity on the basis of its military importance. The F/AD indicates the type of mission priority the activity has. Mission priority ranges from combat, combat ready, and direct combat support (F/AD I), to all other forces and activities (F/AD II, III, IV, and V). Currently, F/AD II is assigned to MOMAG activities outside CONUS. F/AD III is assigned to CONUS detachments.

Urgency of Need Designator (UND)

The Urgency of Need Designator (UND) is a letter (A, B, C) that indicates the relative urgency of the need for a requirement of a force or activity. The Activity's assigned F/AD in conjunction with the appropriate UND determines the correct Priority designator to be assigned to a requisition document.

The basic definitions for the urgency of need designator are as follows:

A 1. Requirement is immediate.

2. Without the material needed, the activity is unable to perform one or more of its primary missions.

3. The condition noted in definition 2 has been reported by established CASREP procedures.

B 1. Requirement is immediate or it is known that such requirement will occur in the immediate future.

2. The activity's ability to perform one or more of its primary missions will be impaired until the material is received.

C 1. Requirement is routine.

Table 4-1.—Table for Determining a Priority Designator

TABLE RELATING F/ADs and UNDs to PRIORITY DESIGNATORS					
	F/AD				
	I	II	III	IV	V
URGENCY OF NEED DESIGNATOR	PRIORITY DESIGNATOR				
A UNABLE TO PERFORM	01	02	03	07	08
B PERFORMANCE IMPAIRED	04	05	06	09	10
C ROUTINE	11	12	13	14	15

Table 4-1 shows how to obtain the proper priority designator. The table is easy to use. For example, if your activity is assigned a F/AD of II and your requirement is of a routine nature, the priority to be assigned would be 12.

In addition to providing standardized criteria for assigning priorities, UMMIPS provides acceptable maximum processing times for use by supply activities in furnishing material. Processing time standards and additional codes used in MILSTRIP and UMMIPS are included in NAVSUP Pub 485.

OPEN PURCHASE

Open purchase refers to the purchase of items outside the normal supply system. Unit and detachment CO/OICs are not designated as contracting or ordering officers and are not authorized to purchase these items. Any requirement for non-standard material must be submitted to your supporting supply activity.

When an open purchase is necessary, you will be required to find the availability of the item and the estimated cost of that item through commercial vendors. Extreme care must be taken so that you will not make a commitment of government funds without approval from your supporting supply activity. A commitment of funds without prior approval can result in your personal acceptance of the financial obligation.

SERVMART

A SERVMART is a self-service store that is operated by an ashore supply activity to provide a ready supply of relatively low-cost items that are frequently required by area commands. The self-service feature and the simplified requisitioning procedures allow supply activities a substantial cost savings while permitting their customers to obtain material quickly, and without having to prepare and submit a separate requisition for each item ordered. SERVMARTs issue a shopping guide that lists the cognizance symbol, NSN, name, unit of issue, unit price, and the storage location of the items stocked. This allows for a quick reference, eliminating the need for looking up each individual item in separate publications.

SERVMART PROCEDURES

When you use the SERVMART, you must prepare a SERVMART shopping list (SSL),

shown in figure 4-8, (NAVSUP Form 1314) and a DD Form 1348 (4 Part). This is mandatory for all procurements from the SERVMART. A separate SSL will accompany each requisition according to the job order number; for example, categories of funds such as custodial, building maintenance supplies, or items of a general nature.

REQUISITION LOGS

Each unit and detachment must establish a requisition log in which all documents for requisitioning are recorded. The log is the principal financial control device for your command. As a supervisor, you will be concerned with the upkeep of three logs; OPTAR, Mine Maintenance, and APA. These logs may be maintained in one log divided into three sections and with each section clearly marked or labeled.

Most of the columns in the log are self-explanatory, but you should observe the following general rules:

- Write all entries in ink and legibly.
- Make corrections with a single line drawn through the entry and initial the error.
- Enter the command/activity name in the space provided in the upper right corner.
- Number each page sequentially.
- Enter the fiscal year on each page.

Each section of your log should be closed out three times each month and the last day of the fiscal year. You should make sure that the proper entries have been made, your columns are totaled, and the transmittal number is posted at the end of the period covered.

REQUISITION FILES

When a procurement document is submitted, a copy of the document is placed in the "outstanding" files. The term *outstanding* denotes material that has been requisitioned but has not yet been received or canceled by the activity.

Requisition files are established according to the types of accounting funds involved. MOMAG activities maintain files for OPTAR, APA, and maintained on a fiscal year basis by document number (Julian date and serial number) sequence.

Outstanding Requisitions

The outstanding requisitions file is actually three files broken down by the types of funds you use (OPTAR, Mine Maintenance, APA). The purpose of the "outstanding" file is to have receipt documents immediately available for processing when the material is received. In addition, the file provides a central location for use as a reference for follow-up action. It also acts as a depository for all receipt documents from the time of initiation of a request until proof of receipt has been obtained. The file can also be used for all other actions that have been taken on a particular document.

Completed Requisitions

When requisitioned material is received or when canceled, all related documents are placed in a material completion file. Like the outstanding files, three similar types of completion files (OPTAR, Mine Maintenance, APA) must be kept. A requisition that has only been partially filled is retained in the outstanding file until action is either completed or canceled.

STATUS OF REQUISITIONS

The amount and type of status information an activity receives is determined by the media and status (M&S) code assigned to a requisition. The supply status keeps an activity informed as to the action being taken by supply activities furnishing the requested material.

Supply status is usually received on a DD Form 1348m (mechanical). This form is almost identical to a DD Form 1348 (manual). The basic differences between the two forms are (1) the DD Form 1348m is a computer punch card and (2) all pertinent information is printed across the top of the card.

For high-priority requisitions, supply-status information may also be received by message or NAVGRAM. In either case, the information is similar in format to a message requisition.

When status information is received, the information should be reviewed immediately to determine the purpose of the document and whether any action is required by the receiving activity. Status documents may cancel an existing

SERVMART SHOPPING LIST (4491)
NAVSUP FORM 1314 (REV. 4-84)
S/N 0108-LF-501-3142

MATERIAL CATEGORY	PAGE OF	JULIAN DATE

SHIP/ACTIVITY	REQUISITION NO.	FUND CODE

ITEM NO.	COG SYM AND NSN	DESCRIPTION	U/I	QTY	UNIT PRICE	EXTENSION	REQUIRING DEPT.
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							
1							
2							
3							
4							
5							

TYPED OR PRINTED NAME AND RANK OR GRADE OF AUTHORIZED SHOPPER _____

DISTRIBUTION: WHITE - Shopper's Copy, YELLOW - Mail to Ship/Activity, PINK - Store's Copy (Optional), GOLD - Supply Officer's Copy

I CERTIFY THAT THE PURCHASE OF MATERIALS LISTED HEREON IS NECESSARY FOR THE OFFICIAL BUSINESS OF THE NAVY.
REQUESTED BY (FOR DIRECT TURNOVER MATERIAL): APPROVED BY:

_____ _____
Authorized Signature *Supply Officer's Signature*

UPON RETURN TO THE SHIP/ACTIVITY, THE FOLLOWING MUST BE COMPLETED: RECEIVED, INSPECTED AND VERIFIED ON:

DATE _____ BY: _____
Typed or Printed Name and Rank or Grade and Signature

PURCHASE SUBTOTAL
PLUS 10% FOR PRICE VARIATIONS
PURCHASE TOTAL*
DD FORM 1348/NAVSUP FORM 1250-1 MAXIMUM AUTHORIZED
*MAY NOT EXCEED DOLLAR LIMIT ON DD FORM 1348 OR NAVSUP FORM 1250-1

UNIT MAILING ADDRESS

Figure 4-8.—NAVSUP Form 1314, Servmart Shopping List.

shipping status, represent passing actions, or modify an order. The status document may also challenge an order. A challenge requires that the requisitioner justify the requested material. Under certain circumstances, if an activity fails to respond to a status document within a specified period of time, the requisition will be canceled automatically.

Too many status codes exist to identify all of them in this training manual. As a supervisor involved in supply-status documents, you must be aware of the various codes your activity may encounter. NAVSUP Pub 485 provides complete listings of the various status codes. NAVSUP Pub 409, and NAVSUPINST 4235.3, Fleet Use of MILSTRIP, are also handy references for a supervisor. They provide general information concerning MILSTRIP procedures and contain the most common codes used.

MATERIAL OBLIGATION VALIDATION (MOV)

An MOV request (or backorder reconciliation) is a request submitted to a requisitioner (or other designated activity) for verification of the requirement on an unfilled requisition. The purposes of MOV requests are to

1. verify outstanding requisitions requirements,

2. validate requisition priorities, and

3. verify the inventory manager's and requisitioning activity's records.

When an MOV request is received, the activity must verify the requisition and prepare a report. As the supply department supervisor, you will be concerned with two types of MOVs: the external and the internal.

External MOVs are validations by the Inventory Control Point (ICP) to have supply activities review all requisitions held on back order (material not available) or those considered overage. The ICP will prepare a material obligation validation on outstanding requisitions that meet the following criteria:

- Priority 01-08 - On order for more than 30 days past the requisition date
- Priority 09-15 - On order for more than 75 days past the requisition date

An MOV must be processed in a timely manner. Your failure to respond to an MOV in the time allowed can result in the cancellation of requisitions and the loss of funds that have been obligated for the purchase of those items.

Internal MOVs are conducted by Commander, Mobile Mine Assembly Group (COMOMAG). COMOMAG maintains a duplicate file of all the units' and detachments' requisitions. Quarterly, each unit and detachment must forward a list of all outstanding requisitions (except non-mine material) to COMOMAG for status verification and validation or to provide proof of delivery. The MOV is then processed by COMOMAG, and any differences are reported to the unit or detachment for correction. Maintenance of your outstanding requisitions file will make the preparation and validation of MOVs much easier.

REPORTING TRANSMITTAL REPORT OF TRANSACTION

The financial obligations your command incurs and the proper use of your budgeted funds are very important. To make sure that your funds are being used to the maximum extent and to make sure you are properly accounting for your funds, COMOMAG keeps duplicate records of each unit and detachment. It is extremely important that these records be accurate and up to date at all times.

The Transmittal Report of Transaction was designed to ensure that COMOMAG was updated on a regular basis on the proper expenditure of funds. Three times each month—the 8th, 18th, and 28th—the report of transactions is forwarded to COMOMAG. When these dates fall on a weekend or holiday, the report is submitted the last working day before the weekend or holiday. You must retain copies of all these transmittal reports in your files. Copies of all DD 1348 forms are stapled to the report along with an adding machine tape to help preclude errors.

In addition to the regular transmittal report, a message transmittal must also be submitted. The message transmittal is not as detailed as the regular transmittal but is sent

RECEIPT, CUSTODY AND STOWAGE

For every procurement action taken by your command, there is a following receipt action. Preparing a requisition is only the first of several functions required to complete a transaction. The material must be received, identified, inspected, and distributed to the warehouse or the department that ordered the material.

Many supply problems in the mine force can be attributed to procedural errors in the receipt of material. Effective inventory control begins with receipt, custody, and stowage of the material. If the procurement documents were properly prepared, the receiving procedure will be relatively simple. If receipts are handled properly, the inventory control will be much easier. Attention to detail, as in all things, is the key to successful operation of your supply department.

RECEIPT OF STOCK MATERIAL

Stock material is a collection of like items in an FSC class. These items are maintained in your supply department and used on a frequent basis. These items could be anything from nuts and bolts to individual mine components. Processing the receipt of this material is a very basic procedure, but if it is not handled properly, it will have a serious effect on the validity of your stock records. The key to processing these items is to complete the job as soon as possible, preferably the same day, and post the material to the OPTAR log and the stock record card, with the stowage location properly annotated.

QUALITY DEFICIENT MATERIAL

There will be times when you receive material that does not meet required standards. This could be incorrect material, shortages in shipment, or defective equipment. If this happens, it is your responsibility to make sure that the material is reported through the proper channels. By reporting deficient material, you are providing feedback for determining the cause of the deficiency, providing information to effect

Upon receipt or discovery of quality deficient material, it should be suspended from issue and properly identified. At this time, the material must be placed in one of two categories.

Category I materials are products that may cause death, injury, or severe occupational illness; could restrict the combat readiness of your command; or could result in production stoppage.

Category II materials are deficient items that do not meet the description of material in category I.

If the material falls under the definition of category I, the initial report must be submitted by priority message and followed with the submission of the Quality Deficient Report, Standard Form 368.

All items in category II will be submitted on Standard Form 368 (figs. 4-9A & B). NAVSUP Pub P-485, chapter 4 gives the proper procedures to follow when reporting quality-deficient material.

MATERIAL LOST IN SHIPMENT

With the large volume of material in the Naval Supply system, the numerous supply centers, and the various modes of transportation used, it is understandable that occasionally a whole or partial shipment may be lost in transit to your command.

Should loss in transit occur, a current status of your outstanding requisitions will enable you to track or identify what material was shipped. If the material does not arrive in a reasonable time after the required delivery date, the requisition must be completed. This is accomplished by surveying the lost material if necessary, and submitting a report of discrepancy (ROD). If the material is still required, you must reorder it.

REPORT OF DISCREPANCY (ROD)

Shipping or packaging discrepancies that are the responsibility of the shipper, contractor,

QUALITY DEFICIENCY REPORT
(Category II)

SECTION I

1a. From (Originating point)	2a. To (Screening point)
1b. Typed Name, Duty Phone and Signature	2b. Typed Name, Duty Phone and Signature

3. Report Control No.	4. Date Deficiency Discovered	5. National Stock No. (NSN)	6. Nomenclature

7. Manufacturer/Mfg. Code/Shipper	8. Mfg. Part No.	9. Serial/Lot/Batch No.	10. Contract/PO/Document No.

11. Item	12. Date Manufactured/ Repaired/Overhauled	13. Operating Time at Failure	14. Government Furnished Material
☐ New ☐ Repaired/ Overhauled			☐ Yes ☐ No

15. Quantity	a. Received	b. Inspected	c. Deficient	d. In Stock

16. Deficient Item Works On/With	(1) Type/Model/Series	(2) Serial No.
a. End Item (Aircraft, tank, ship, howitzer, etc.)		

b. Next Higher Assembly	(1) National Stock No. (NSN)	(2) Nomenclature	(3) Part No.	(4) Serial No./Lot No.

17. Dollar Value	18. Est. Correction Cost	19. Item Under Warranty	20. Work Unit Code/EIC (Navy and Air Force only)
		☐ Yes ☐ No ☐ Unknown	

21. Action/Disposition

☐ Holding Exhibit for _____ days ☐ Released for Investigation ☐ Returned to Stock/ Disposed of ☐ Repaired ☐ Other (Explain in Item 22)

22. Details (Describe, to best ability, what is wrong, how and why, circumstances prior to difficulty, description of difficulty, cause, action taken including disposition, recommendations. Identify with related item number. Include and list supporting documents. Continue on separate sheet if necessary.)

SECTION II

23a. To (Action Point)	24a. To (Support Point) (Use Items 25 and 26 if more than one)
23b. Typed Name, Duty Phone and Signature	24b. Typed Name, Duty Phone and Signature
25a. To (Support Point)	26a. To (Support Point)
25b. Typed Name, Duty Phone and Signature	26b. Typed Name, Duty Phone and Signature

368-101

STANDARD FORM 368, April 1974
General Services Administration (FPMR 101-26-7)

Figure 4-9A.—Standard Form 368, Quality Deficiency Report (front).

SECTION III

27a. From (Action point)	28a. To (Screening point)
27b. Typed Name, Duty Phone and Signature	28b. Typed Name, Duty Phone and Signature

29. Specification No.	30. Originators Method of Notification		
	☐ SF 368	☐ Msg (Copy attached)	☐ Phone Call/Visit

31. Type of Shipment/Purchase

Direct Delivery From Vendor:

☐ Depot ☐ Stock Item ☐ Nonstock Item ☐ Federal Supply Schedule ☐ Other (Specify)

32. Findings and Recommendations of Investigation (Explain in detail. Continue on a separate sheet of paper, if necessary.)

33. Action Taken

34. Results of Depot Surveillance

35. From (Screening point)	36. To (Originator)

37. Distribution

STANDARD FORM **368 BACK**
April 1974

Figure 4-9B.—Standard Form 368, Quality Deficiency Report (back).

manufacturer, or the vendor should be reported on Standard Form 364, Report of Discrepancy (ROD) (fig. 4-10). The ROD is used to determine the cause of such discrepancies, to initiate corrective action, and to prevent the problem from reoccurring. Detailed instructions for and the types of discrepancies you should report are found in NAVSUP P-485, chapter 4.

COMPLETED REQUISITION PROCESSING

The requisition files that you maintain in your supply department actually consist of six files; OPTAR, Mine Maintenance, and APA outstanding files and completed files. These files are maintained in order of fiscal year, julian date, and serial number.

When material is received, it is accompanied by a variety of paperwork, depending on how the material was shipped, the type of material requested, and who the issuing activity is. You must remember to accomplish the following three steps upon the initial receipt of items determined to be a complete shipment:

1. Date the document upon receipt.
2. Circle the quantity accepted.
3. Sign the document to indicate the receipt.

Once these steps have been completed, you must make sure the material is posted in the requisition log and on the stock record card (NAVSUP 1296/1297). Next, annotate the paperwork with the word *posted*, sign it, and date the document as of the date it was posted.

To complete the requisition, attach a completed copy of the shipping document to the outstanding requisition, and file it in the completed requisition file. The other copy must be sent to COMOMAG in the next transmittal report.

There will be times when you receive only a partial shipment of the material you ordered. If this happens, you should follow the above steps on the receipt of material, but you will maintain the signed receipt in the outstanding requisition file until you receive the rest of the shipment.

MATERIAL CUSTODY

The Navy maintains in its inventory many items that could easily be converted to personal items at your command are properly accounted for and properly safeguarded. Two key words that you must always keep in mind are *Responsibility* and *Accountability*. In this section, we discuss some of the items and areas of material custody.

PLANT PROPERTY

For management, financial, and technical control purposes, plant property items used by the navy are divided into the following four classes:

1. Land—Plant Property Class 1
2. Buildings, Structures, and Utilities—Plant Property Class 2
3. Equipment (other than industrial plant equipment)—Plant Property Class 3
4. Industrial Plant Equipment—Plant Property Class 4

Normally, you will encounter only class 3 plant property at any MOMAG unit or detachment. To decide if an item is classified as plant property, you should apply the following standard:

- It must have an actual initial cost of $5,000 or more.

- It must have an expected normal useful life of 2 years or more.

- It must be used in the assistance of the command's assigned mission.

- It must not be altered beyond its design capabilities.

- It must not be consumed in the performance of its work.

NOTE

The $5,000 rule applies only to class 3 and 4 property placed in service after 01 October 1987. It has no effect on accounting for previously recorded capital assets.

There are two categories of plant property that you will encounter at a unit or detachment. These are host-activity-owned plant property and

REPORT OF DISCREPANCY (ROD)

1. DATE OF PREPARATION | 2. REPORT NUMBER

☐ SHIPPING ☐ PACKAGING

3. TO *(Name and address, include ZIP Code)*

4. FROM *(Name and address, include ZIP Code)*

5a. SHIPPER'S NAME

5b. NUMBER AND DATE OF INVOICE

6. TRANSPORTATION DOCUMENT NUMBER *(GBL, Waybill, TCN, etc.)*

7a. SHIPPER'S NUMBER *(Purchase Order/Shipment, Contract, etc.)*

7b. OFFICE ADMINISTERING CONTRACT

8. REQUISITIONER'S NUMBER *(Requisition, Purchase Request, etc.)*

9. SHIPMENT, BILLING, AND RECEIPT DATA				10. DISCREPANCY DATA				11. AC[2] TION CODE
NSN/PART NUMBER AND NOMENCLATURE (a)	UNIT OF ISSUE (b)	QUANTITY SHIPPED/ BILLED (c)	QUANTITY RECEIVED (d)	QUANTITY (a)	UNIT PRICE (b)	TOTAL COST (c)	CODE[1] (d)	

12. REMARKS *(Continue on separate sheet of paper if necessary)*

[1] DISCREPANCY CODES

CONDITION OF MATERIAL
- C1 — In condition other than that indicated on release/receipt document
- C2 — Expired shelf life
- C3 — Damaged parcel post shipment

SUPPLY DOCUMENTATION
- D1 — Not received
- D2 — Illegible or mutilated
- D3 — Incomplete improper or without authority *(Only when receipt cannot be properly processed)*

MISDIRECTED MATERIAL
- M1 — Addressed to wrong activity

OVERAGE/DUPLICATE SHIPMENTS
- O1 — Quantity in excess of that on receipt document
- O2 — Quantity in excess of that requested *(Other than unit of issue pack)*
- O3 — Quantity duplicates shipment

PACKING DISCREPANCY
- P1 — Improper preservation
- P2 — Improper packing
- P3 — Improper marking
- P4 — Improper unitization

PRODUCT QUALITY DEFICIENCIES
- Q1 — Deficient material *(Applicable to Grant Aid and FMS shipments only)*

SHORTAGE OF MATERIAL
- S1 — Quantity less than that on receipt document
- S2 — Quantity less that that requested *(Other than unit of issue pack)*
- S3 — Non-receipt of parcel post shipments

ITEM TECHNICAL DATA MARKINGS *(i.e., Name Plates, Log Books, Operating Handbooks, Special Instructions, etc.)*
- T1 — Missing
- T2 — Illegible or mutilated
- T3 — Precautionary operational markings missing
- T4 — Inspection data missing or incomplete
- T5 — Serviceability operating data missing or incomplete
- T6 — Warranty data missing

WRONG ITEM *(Identify requested item as a separate copy in item 9 above)*
- W1 — Incorrect item received
- W2 — Unacceptable substitute

OTHER DISCREPANCIES
- Z1 — See remarks

[2] ACTION CODES

- 1A — Disposition instructions requested *(Reply on reverse)*
- 1B — Material being retained *(See remarks)*
- 1C — Supporting supply documentation requested
- 1D — Material still required expedite shipment *(Not applicable to FMS)*
- 1E — Local purchase material to be returned at supplier's expense unless disposition instructions to the contrary are received within 15 days *(Reply on reverse)* *(Not applicable to FMS)*
- 1F — Replacement shipment requested *(Not applicable to FMS)*
- 1G — Reshipment not required. Item to be re-requisitioned.
- 1H — No action required. Information only
- 1Z — Other action requested *(See remarks)*

13. FUNDING AND ACCOUNTING DATA

14a. TYPED OR PRINTED NAME, TITLE, AND PHONE NUMBER OF PREPARING OFFICIAL

14b. SIGNATURE

15. DISTRIBUTION ADDRESSEES FOR COPIES

364-103 7540-00-159-4442 *(Previous edition is obsolete.)* **STANDARD FORM 364 (REV. 2-80)** Prescribed by GSA FPMR 101-26.8

Figure 4-10.—Standard Form 364, Report of Discrepancy.

by the host activity will not be accounted for by COMOMAG. It will be reported under local procedures.

COMOMAG-owned Property

Any plant property provided to the unit or detachment by COMOMAG will be reported to COMOMAG. Reporting procedures, as well as requisitions, inventories, and survey of COMOMAG-owned plant property, is contained in COMOMAGINST 4000.1.

MINOR PROPERTY/CONTROLLED EQUIPAGE

Minor property and controlled equipage items are defined as property that is acquired for immediate use and has a unit cost of less that $5,000 and a useful life of 2 years or less.

Minor property and controlled equipage items can easily be converted to personal use; therefore, it must be accounted for by proper internal control. The Controlled Equipage Item List (CEIL) is an item listing that the fleet commanders-in-chief developed jointly to control special-inventory-control items. The items selected to be managed as controlled equipage are categorized and listed as signature and non-signature controlled items. This list is available in NAVSUP P-485.

Should the commanding officer/officer-in-charge decide that the CEIL listing is not sufficient, he may designate additional equipage items that he thinks require controlling.

CONTROLLED EQUIPAGE CUSTODY RECORD

The Controlled Equipage Custody Record, NAVSUP Form 306, (fig. 4-11) is the proper form to use as a custody record and inventory control document. A complete description of the item must be shown, including serial numbers when required.

Even though the control of the items is ultimately the responsibility of the commanding officer/officer-in-charge, he may give physical custody of these items to different departments, as required. The subcustody should also be documented on a duplicate NAVSUP Form 306 and

under lock and key.

MATERIAL STOWAGE

Material that is maintained in the warehouse, in magazines, and other stowage areas should be arranged to make sure the following actions are complied with:

- Maximize the use of available space.
- Provide orderly stowage and ready accessibility.
- Reduce the possibility of material loss or damage.
- Minimize the possibility of personnel or equipment damage.
- Ensure that the first-in-first-out (FIFO) method is used, to make sure the oldest material is issued first.
- Make inventories easier.

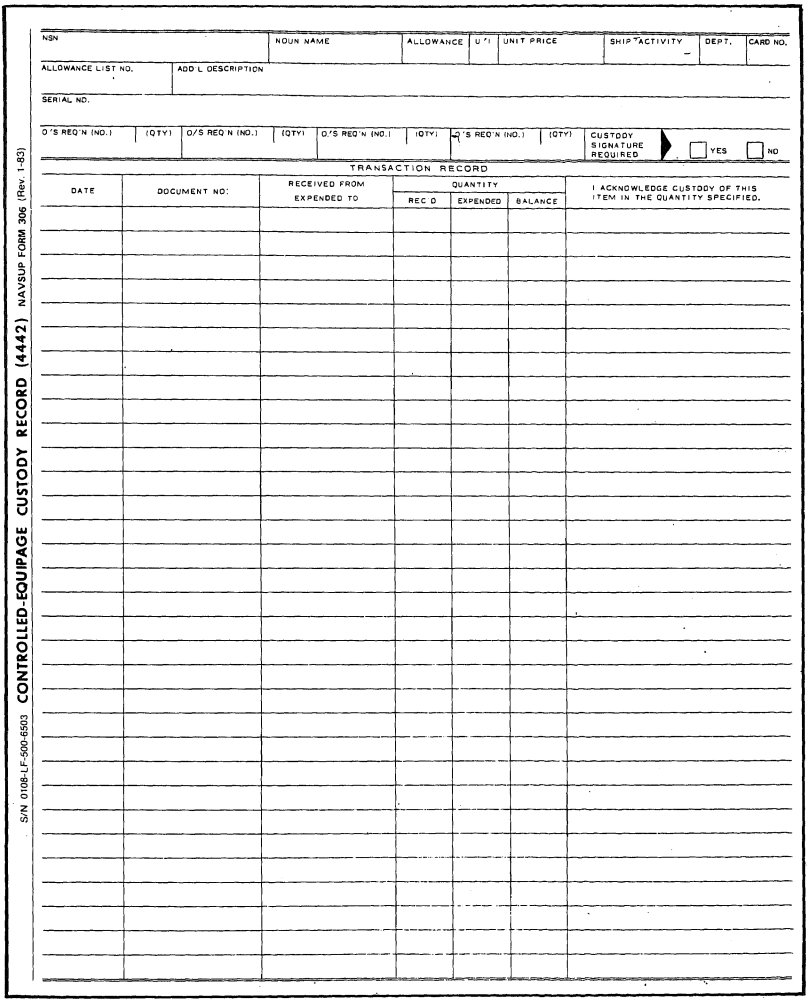
Through the proper use of current instructions, good judgment, proper planning, and common sense you will be able to achieve the best stowage from your spaces.

MATERIAL PROTECTION

Material that is received by your command will have some type of preservation-packaging and packing applied to it. These protection levels are to protect the material from deterioration and damage during shipment, handling, and stowage.

Since most materials you receive will have been adequately packed before shipment, your responsibilities for ensuring that the material is protected is limited to the following:

- Retaining repair parts in their original packaging until issued
- Repackaging items that were not properly protected when received or that had their packaging removed or damaged while in stowage



CONTROLLED-EQUIPAGE CUSTODY RECORD (4442) NAVSUP FORM 306 (Rev. 1-83)

S/N 0108-LF-500-6503

NSN | NOUN NAME | ALLOWANCE | U/I | UNIT PRICE | SHIP "ACTIVITY | DEPT. | CARD NO.

ALLOWANCE LIST NO. | ADD'L DESCRIPTION

SERIAL NO.

O/S REQ'N (NO.) | (QTY) | O/S REQ'N (NO.) | (QTY) | O/S REQ'N (NO.) | (QTY) | O/S REQ'N (NO.) | (QTY) | CUSTODY SIGNATURE REQUIRED ▶ ☐ YES ☐ NO

TRANSACTION RECORD

DATE	DOCUMENT NO.	RECEIVED FROM / EXPENDED TO	QUANTITY			I ACKNOWLEDGE CUSTODY OF THIS ITEM IN THE QUANTITY SPECIFIED.
			REC'D	EXPENDED	BALANCE	

Figure 4-11.—NAVSUP Form 306, Controlled Equipage Custody Card.

- Reporting material received in an unsatisfactory condition due to inadequate or improper preservation, packaging, or marking

- Repackaging excess items returned from other departments

- Packaging or repackaging material for shipment to other commands or for turn-in

Providing adequate protection of your stock items is essential to ensuring that all material is ready for issue (RFI).

MATERIAL SECURITY

Security of material in your supply spaces is essential. You must make sure that all classified and pilferable material are stowed according to the following general security rules:

- Materials are always kept under lock and key unless the bulk of the material makes this impractical.

- All supply spaces are locked when not attended by authorized personnel.

- All supply keys are kept under strict control.

Remember the responsibility for the supply spaces rests with you, the supervisor.

MATERIAL DISPOSITION

Expenditure is any act that results in a decrease of Navy assets (materials or funds). Expenditure of material is the reduction of material held in stock by an activity. The three ways of expending material are issue, transfer, and survey. The three types of expenditures are defined in the following paragraphs.

An *issue* is the physical release of material by the supply department or division to a user of the material. The term *issue* includes the term *loss by inventory* (LBI). However, *issue* should NOT be used interchangeably with the term *transfer*.

A *transfer* is the movement (including turn-in) of material from the custody and records of

A *survey* is a procedure used to expend material from stock and/or custody records in one of the following situations:

- The material is condemned as a result of damage, obsolescence, or deterioration.

- The material is appraised as damaged or destroyed as a result of a loss of utility, not due to misconduct.

- The material is acknowledged as nonexistent as a result of loss due to theft.

In the following paragraphs, we will briefly discuss the issue, transfer, and survey of material. Complete information concerning the expenditure of material is contained in NAVSUP Pub 485, COMOMAGINST 4000.1, and other applicable publications and directives.

ISSUE PROCEDURES

When a division requests material from the supply section, such requests should be submitted on a NAVSUP Form 1250 and logged in the Division/Department requisition log. Once the material is received, the receipt date will be logged in the requisition log. If the material ordered is not in stock, the supply department will assign a requisition number and return a copy of the 1250 to the requesting department. This requisition number will then be logged in the department requisition log.

Supply personnel will indicate on the 1250 whether the material was issued or ordered. The information is then recorded on the appropriate stock record cards.

INTERNAL TURN-IN OF MATERIAL

During maintenance or build-up evolutions, your department may accumulate excess material. Should this happen, all unused material must be turned in to the supply department as soon as possible to avoid back logs or to keep supply from ordering more of the same material when it is not required. Once this material is turned in, it is the responsibility of the supply supervisor to make sure the material is returned to stock or to dispose of it as directed.

TRANSFER OF MATERIAL

Material is transferred for a variety of reasons.

material, a transfer of material is involved. When an intermediate-maintenance activity returns excess or unserviceable material to a supply depot, a transfer of material is also involved. Thus, MOMAG activities can be on both the receiving and the sending ends of material transfers.

The transfer of material from an activity may be made only when authorized by proper authority. Depending upon the material involved, such authorizations may be automatically granted by a directive, or a request for such an authorization may have to be submitted in writing.

Material to be transferred must be forwarded with the proper documents. The DD Form 1348-1, DOD Single Line Item Release/Receipt Document, is the most commonly used document for transferring material. Like other supply documents, a copy of all DD Forms 1348-1 issued from or received by an activity must be filed and maintained.

SURVEY

The purpose of a survey is to determine the reason and/or responsibility for the loss, damage, or destruction of government material and to determine the actual loss to the U.S. Government. Immediately upon the discovery of the loss, damage, or destruction of government material, a preliminary investigation is conducted to determine if there is evidence of negligence, willful misconduct, or deliberate unauthorized use. This preliminary investigation is conducted by the department head or division officer (or equivalent) responsible for the material. When circumstances warrant, such as an indication of criminal action or gross negligence, the CO or OIC may appoint a surveying officer or a survey board to investigate the situation further. Individuals who are accountable or responsible for the material in question may NOT be appointed as a surveying officer.

An investigation or review must determine what caused the loss, damage, or destruction of the material being surveyed. To make a determination for cause, the facts surrounding the incident must be thoroughly and quickly investigated. However, the investigation or review should not be limited to the verification of statements from individuals. The investigation should be broad enough to ensure that the interests of the Government, as well as the rights of the individual(s) and the Navy activity, are fully protected. A review is required to prove or refute statements from individuals and to place the responsibility where it belongs.

Research action is not required when it is the opinion of the CO or OIC that negligence was not involved in the loss, damage, or destruction of government property. When, for reasons known to the CO or OIC, negligence or responsibility cannot be determined and research under those conditions would constitute an unnecessary administrative burden, research action is not required. Research action is not usually required when an individual accepts responsibility for the loss, damage, or destruction of property and voluntarily offers to reimburse the Government for the material. The form used for survey procedures is DD Form 200 (Report of Survey).

NOTE

Material that is lost, damaged, or destroyed during shipment is not subject to survey. Such material requires a Report of Discrepancy (ROD), Standard Form 364. Additional situations or material that may be exempted from survey procedures are contained in NAVSUP Pub 485.

DISPOSITION OF MINE MATERIAL

The disposition (transfer or survey) of mine material may require special authorization or may be automatically authorized. Disposition procedures for mine material depend upon many factors, such as the following:

- Geographical location (Atlantic or Pacific) of the activity with the material
- Procedures of the inventory control manager
- Type of material involved
- Serviceability or unserviceability of the material
- Type of account (APA, NSA, etc.) involved

You will be dealing with two types of material dispositions, Serviceable and Unserviceable. The following section will explain some of the procedures required for disposition of these materials.

Disposition of excess material, both Service and ET, is required to ensure that you are at your allowance levels and to make material available to other sites that may be below their allowance and having trouble obtaining needed materials.

Inventory control managers will issue disposition instructions for Service and ET mine material. Some of the items receive automatic disposition, while others require that a request be submitted. COMOMAGINST 4000.1 provides detailed guidance and references for the disposition of mine material.

Serviceable Material

Disposition requests for excess mine material identified as APA (nonchargeable) items must be submitted on an Ammunition Disposition Request and Authorization (ADRA), NAVSEA Form 8012/2. An ADRA (fig. 4-12) should be prepared and submitted according to COMOMAGINST 4000.1, SPCCINST 8010.12, and CINCPACFLTINST 8010.12 or CINCLANTFLTINST 8010.12.

Excess mine material identified as NSA (chargeable) or mandatory turn-in repairable (MTR) and not covered by other instructions should be offered to all units and detachments by letter or NAVGRAM, with an information copy to COMOMAG. Material not required for immediate use by MOMAG activities are processed under normal disposition procedures.

Unserviceable Material

Assembly-level items reported as reject material on supplement B and E sheets normally do not require disposition requests. Disposition instructions are provided automatically by the NAVMINWARENGRACT when certain function codes are used on the supplement sheets unless a reporting activity indicates otherwise. Disposition instructions are forwarded on computer printout sheets and include sufficient data for an activity to prepare the shipping documents. If disposition instructions for reject items reported on supplement sheets are not received within 3 months, a follow-up tracer letter should be submitted to NAVMINENWARGRACT.

Ammunition is designed and produced with as high a degree of safety and reliability as is attainable. However, during quality evaluation or surveillance testing, it is sometimes determined that an item will no longer function following design specifications. Therefore, its use must be limited, suspended, or permanently curtailed. Malfunctions and discrepancies reported by using units also prompt inputs to the reclassification program, as does the declaration of material as obsolete/disposable. Information on reclassification actions is promulgated by Navy Ship's Part's Control Center via Notices of Ammunition Reclassification (NAR) or changes to TW024-AA-ORD-010, *Ammunition—Unserviceable, Suspended, and Limited Use.*

NARs are promulgated by SPCC to supplement TW024-AA-ORD-010. Each NAR contains a separate reclassification action. A NAR may also be used to transmit technical or precautionary data pending its inclusion in the appropriate technical manual.

NARs are distributed in message format to Address Indicating Group (AIG) 181. Each NAR message normally contains more than one NAR.

NARs are numbered sequentially through each calendar year. When a NAR message is received, the NAR numbers should be checked against previously received NARs. If any void is noted in the sequence of NAR numbers, retransmission of the missing NAR(s) should be requested from SPCC, Mechanicsburg, Pennsylvania.

Each activity having reclassified ammunition on hand must report it as soon as possible in accordance with TWO24-AA-ORD-010 unless otherwise directed in the NAR message. Material reported in response to a NAR should not be reported again when reclassification information is incorporated in TWO24-AA-ORD-010. Individual holding activities should dispose of ammunition reclassified as suspended or unserviceable by TWO24-AA-ORD-010 or a NAR through normal supply channels.

MISSING, LOST, STOLEN, OR RECOVERED (M-L-S-R) GOVERNMENT PROPERTY

Certain categories of material are so sensitive that they must be made immediately visible to investigating agencies at the time of loss or recovery. In light of this, the Navy has instituted M-L-S-R reporting procedures to help recognize

NAVSEA 8012/2 (Rev. 2-81) (Front) AMMUNITION DISPOSITION REQUEST AND AUTHORIZATION (ADRA) S/N 0116-LF-080-1210 (Read the special instructions before completing this form) **(NAVSEAINST 4570.1)**

TO: (Appropriate Inventory Manager)	FROM (Requesting Activity)	ACTIVITY ADRA NUMBER	AMMUNITION CLASS CODE	DATE
		COGNIZANCE SYMBOL	SIGNATURE (Requesting Activity Official)	CODE

PART I – AMMUNITION DISPOSITION REQUEST – APPLICABLE ONLY TO CATALOGED ITEMS (To be completed by requesting activity)

ITEM NO.	NSN	DODAC	C/C	QUANTITY	NOMENCLATURE	OC	SEC	REASON FOR ADRA	PACKAGING DATA	I&M ONLY NOTES
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

REMARKS

COPY TO:

Figure 4-12.—NAVSEA Form 8012/2, Ammunition Disposition Request and Authorization.

physical security needs and to reduce property losses. SECNAVINST 5500.4 and COMOMAG-INST 4000.1 give complete instructions on report-ing M-S-L-R material. Material under the following categories must be reported:

- All serialized or unserialized firearms, weapons, ammunition, explosives, and other destructive devices, regardless of value
- Highly technical items
- Classified items
- Cumulative losses of serialized or unserialized items exceeding $500 for Navy-owned material

Proper management of naval material is a matter of top priority for all personnel, and each person is responsible for safeguarding all government property under his or her jurisdiction whether or not he or she has signed a receipt.

EXPENDITURE RECORDS AND FILES

All material expenditures must be recorded on the appropriate stock record card for the items. The transfer or survey of material must be recorded in an expenditure record log. An expenditure record log is used to control expenditure document number assignments and to provide a record of expenditures. An expenditure record log is normally divided into two sections: expenditures except for mandatory turn-in repairable (MTR) items, and MTR items. Expenditures are recorded in expenditure-document-number sequence.

In addition to an expenditure record log, an expenditure invoice file must be maintained. An expenditure invoice file consists of DD Form 1348-1, DD Form 1149, and other appropriate documents. A copy of each expenditure document is filed in document-serial-number sequence. The original of each expenditure invoice containing a receipt signature should ultimately be filed in the expenditure file. The only exception to maintaining the original form is in the case of a survey of plant property. The original invoice document for surveyed plant property is forwarded to COMOMAG and a copy is retained by MOMAG activities.

MATERIAL SHIPMENT

Vast quantities of material move daily in support of naval operations representing a substantial en route dollar value. Many of the en route items affect to some degree the operational capabilities of naval activities. Material movement is an essential link in the chain of supply support. When, as a result of improper documentation and marking, shipments are delayed, misrouted, or lost, man-hours are lost tracing the delinquent shipments. More important, the lack of critically needed parts reduces the operational capabilities of the intended recipient.

MILITARY STANDARD TRANSPORTATION AND MOVEMENT PROCEDURES (MILSTAMP)

The Military Standard Transportation and Movement Procedures (MILSTAMP) provides a means for better control of transportation performance to users; it also provides more efficient usage of the available Defense Transportation System (DTS) capabilities. It permits greater efficiency in shipment planning. Documents used are uniform, and the system is compatible with MILSTRIP. A standard transportation priority system is based on the Uniform Material Movement and Issue Priority System (UMMIPS).

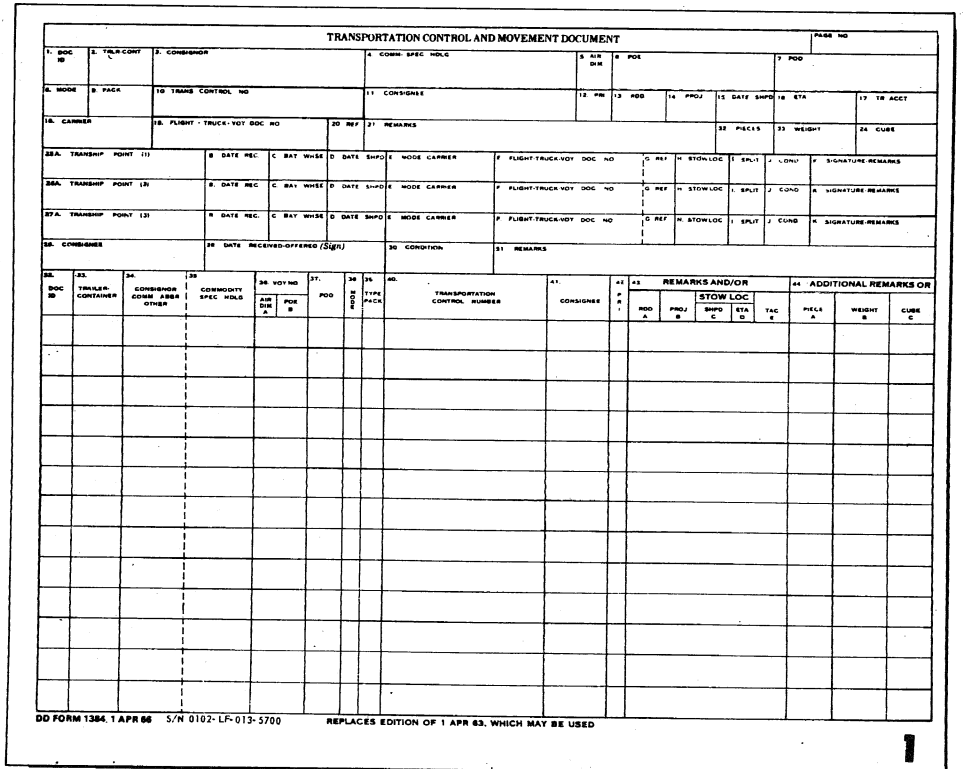
MILSTAMP is mandatory for all military services and other agencies using the DTS. MILSTAMP does not apply to the following:

- Internal shipments within military installations, or local-area shipments in support of satellite activities
- Shipments completely within the mail systems
- Shipments moving on commercial bills of lading from, to, or between contractors' plants
- Movement of passengers

Complete information concerning MILSTAMP is contained in DOD Regulation 4500.32-R, *Military Standard Transportation and Movement Procedures.*

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT (TCMD)

In any material transportation system, there is a requirement for certain basic information and data. This is accomplished by using a single, comprehensive, control document. This basic document is the Transportation Control and Movement Document (TCMD), DD Form 1384 (fig. 4-13). The shipper is responsible for the



TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT

PAGE NO

1. DOC ID	2. TRLR-CONT	3. CONSIGNOR	4. COMM SPEC HDLG	5. AIR DIM	6. POE	7. POD

8. MODE	9. PACK	10. TRANS CONTROL NO	11. CONSIGNEE	12. PRI	13. RDD	14. PROJ	15. DATE SHPD	16. ETA	17. TR ACCT

18. CARRIER	18. FLIGHT - TRUCK - VOY DOC NO	20. REF	21. REMARKS	22. PIECES	23. WEIGHT	24. CUBE

25A. TRANSHIP POINT (1)	B. DATE REC	C. BAY WHSE	D. DATE SHPD	E. MODE CARRIER	F. FLIGHT-TRUCK-VOY DOC NO	G. REF	H. STOW LOC	I. SPLIT	J. COND	K. SIGNATURE-REMARKS
26A. TRANSHIP POINT (2)	B. DATE REC	C. BAY WHSE	D. DATE SHPD	E. MODE CARRIER	F. FLIGHT-TRUCK-VOY DOC NO	G. REF	H. STOW LOC	I. SPLIT	J. COND	K. SIGNATURE-REMARKS
27A. TRANSHIP POINT (3)	B. DATE REC.	C. BAY WHSE	D. DATE SHPD	E. MODE CARRIER	F. FLIGHT-TRUCK-VOY DOC NO	G. REF	H. STOW LOC	I. SPLIT	J. COND	K. SIGNATURE-REMARKS

28. CONSIGNEE	29. DATE RECEIVED-OFFERED (Sign)	30. CONDITION	31. REMARKS

32. DOC ID	33. TRAILER-CONTAINER	34. CONSIGNOR COMM AGENCY OTHER	35. COMMODITY SPEC HDLG	36. VOY NO AIR DIM A	36. VOY NO POE B	37. POD	38. MODE	39. TYPE PACK	40. TRANSPORTATION CONTROL NUMBER	41. CONSIGNEE	42. PRI	43. REMARKS AND/OR RDD A	43. REMARKS AND/OR PROJ B	43. REMARKS AND/OR STOW LOC SHPD C	43. REMARKS AND/OR STOW LOC ETA D	43. REMARKS AND/OR TAC E	44. ADDITIONAL REMARKS OR PIECES A	44. ADDITIONAL REMARKS OR WEIGHT B	44. ADDITIONAL REMARKS OR CUBE C

DD FORM 1384, 1 APR 66 S/N 0102-LF-013-5700 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED

1

Figure 4-13.—DD Form 1384, Transportation Control and Movement Document.

preparation of the TCMD in its various forms and formats, including message formats.

The TCMD is a multipurpose document (or format) that is designed for the following purposes:

1. To identify the material in a shipment and indicate necessary transportation data. It takes the place of airbills, Navy cargo documents, and material-routing sheets.
2. To obtain clearance and provide advance notice intermediate transshipment points that a shipment is to be expected.
3. To provide the information required to trace a shipment.

When an activity uses DD Form 1384, one copy of each DD Form 1348-1 associated with the shipment should be filed with the TCMD. All forms associated with a shipment should be placed in a folder and filed numerically in TCMD-document-number sequence.

NOTE

The DD Form 1348-1 filed with a TCMD is in addition to the DD Form 1348-1 filed in the expenditure files.

TRANSPORTATION CONTROL NUMBER

Transportation control numbers (TCNs) are the basic element in the MILSTAMP system. A number is assigned to each shipment unit for the shipment control from origin to destination. To avoid duplicate number assignment, construct TCNs as follows:

- If the shipment you are working on is a fulfillment of a MILSTRIP requisition, the MILSTRIP requisition number and three alphabetic characters assigned by the command become the TCN. The alphabetic characters identify complete, partial, and split shipments. Complete shipments are indicated by "XXX."

- For shipments that are non-MILSTRIP, the shipping activity will assign the TCN. The TCN can be derived by using DODINST 4500.32-R, Appendix C.

INVENTORY MANAGEMENT

The primary function of any supply organization is to ensure the availability of materials in the proper amount, at the proper place, and at the proper time. To accomplish this, continuous and judicious management of materials must be exercised.

Inventory management requires the control of, and agreement between, stock and stock records, accurate allowance lists, evaluation of material usage, and anticipation of future requirements. In addition, reports must reflect accurate information so that Navy inventory managers can provide for future requirements.

ALLOWANCES

Allowance lists itemize the material requirements of an activity. Allowance lists are used extensively to identify and procure repair parts, equipage, and consumable materials necessary to maintain and support an activity's mission. You, as the supervisor, will be dealing with allowances for service mines and components and exercise and training mines and components.

Service Mines and Components

The allowance for service mines and components is established by COMINEWARCOM-INST 8550.5. Component spares and repair parts must be stocked to the levels set by the Mine Bill of Material (MBOM). Requisitions will be submitted promptly for any issue of expenditure of material that would reduce your stock below the allowance quantity. If you are in excess of allowance, the material will be reported and turned in to the appropriate inventory manager or made available for redistribution in accordance with the proper directives.

Exercise and Training Mines and Components

The allowance for exercise and training mines and components is established by COMOMAG-INST 8550.9. Any unit or detachment that maintains ET mines will maintain stocks to the levels established in the MBOM. As with service mines and components, if your allowance falls below the MBOM allowance, you must promptly submit a requisition to order up to your established allowance.

At times you may become in excess of allowance in ET material because training exercises are cancelled. If this occurs, you may obtain permission from COMOMAG to retain the excess material on board. The request must be

fully justified, and the projected date that your stock levels will be reduced to allowance levels must be provided.

RECORDS AND FILES

Stock records are essential for the inventory management of an activity. Without stock records, it is impossible to maintain an adequate stock of materials necessary for the operation and mission of the activity.

Stock Record Cards

Stock records are maintained on various types of forms called stock record cards. Procurement of material is based on the information contained on the stock record card. Stock record cards generally provide the following information about an item:

1. Identification (nomenclature, stock number, NALC, etc.)
2. Balance on hand
3. Receipt and expenditure
4. Quantity due in
5. Storage location
6. Special information necessary for stock control personnel (for example, explosive weights and mine assembly configuration)

The four types of stock record cards generally used by MOMAG activities are briefly discussed in the following paragraphs.

AMMUNITION STOCK RECORD CARD.—The Ammunition Stock Record Card, NAVSUP Form 1296, is the primary stock record card used by MOMAG activities. A separate Ammunition Stock Record Card must be maintained for each type of mine material held or required by an activity. The Ammunition Stock Record Card (fig. 4-14) is yellow.

Instructions for completing the Ammunition Stock Record Card are contained in SPCCINST 8010.12 and COMOMAGINST 4000.1.

Ammunition stock record cards are designed to be filed in a McMillan binder or a Cardex file. The cards must be filed in one of the following identification sequences, depending on the identification information available to you:

- NALC

AMMUNITION MASTER STOCK RECORD CARD

ENTRY DATE	DOCUMENT NUMBER			TRANSACTIONS		ON-HAND BALANCES					ATR SERIAL	QUANTITY DUE-IN	UNEXP TRAINING ALLOC
	ACTIVITY	DATE	SERIAL	TYPE	QUANTITY	COND. "A"	COND.	COND.	COND.	COND.			
BALANCE FORWARD													

- Stock number (NIIN sequence)
- NICN (alphanumeric sequence)
- Drawing or reference number
- Mine material management code (MMC)
- Nomenclature

AMMUNITION LOT/LOCATION CARD.—Ammunition Lot/Location Cards, NAVSUP Form 1297, are used with an Ammunition Stock Record Card. A lot/location card is used when lot control or different locations of items are applicable. The Ammunition Lot/Location Card (fig. 4-15) is green.

Instructions for completing Ammunition Lot/Location Cards are contained in the same directives as the instructions for the ammunition stock record cards. Ammunition Lot/Location Cards are filed immediately after the corresponding stock record cards.

AMMUNITION SERIAL/LOT LOCATION CARD.—Ammunition Serial/Location Cards, NAVSUP 1356, are used to track all items that require control by serial number. The Ammunition Serial/Location Card (fig. 4-16) is blue.

Instructions for completing these cards are contained in the same directives as the instructions for the ammunition stock record cards. The serial/lot location card should be filed immediately behind the appropriate stock record card.

MISCELLANEOUS STOCK RECORD CARDS.—A different type of stock record card must be used for non-ammunition material. Supply personnel generally prefer the Stock Record Card Afloat, NAVSUP Form 1114 (Manual), although other types of stock record cards may be used. However, your activity should use only one type of card for non-ammunition material. Instructions for completing the Stock Record Card Afloat and other types are contained in NAVSUP Pub 485. The filing sequences for non-ammunition stock record cards are the same as for Ammunition Stock Record Cards. The preferred sequence is numerically by stock number (NIIN). Non-ammunition materials do not have NALCs.

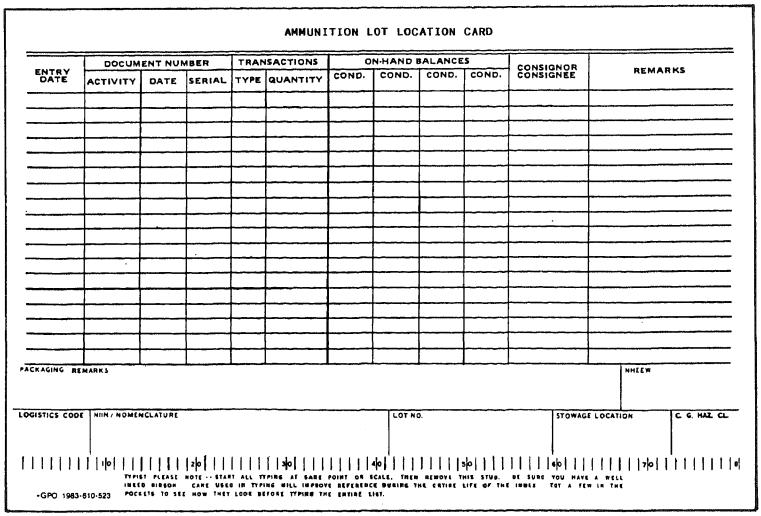
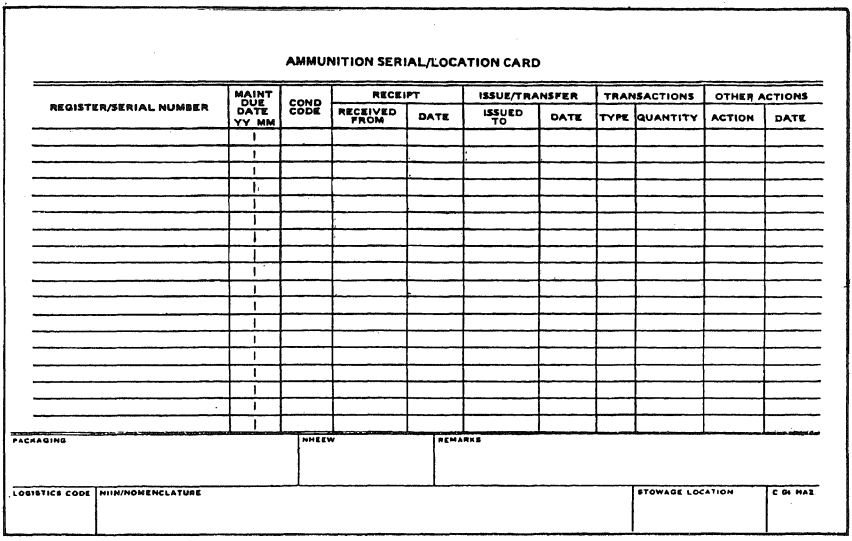


Figure 4-15.—NAVSUP Form 1297, Ammunition Lot/Location Card (green).



AMMUNITION SERIAL/LOCATION CARD

REGISTER/SERIAL NUMBER	MAINT DUE DATE YY MM	COND CODE	RECEIPT		ISSUE/TRANSFER		TRANSACTIONS		OTHER ACTIONS	
			RECEIVED FROM	DATE	ISSUED TO	DATE	TYPE	QUANTITY	ACTION	DATE

PACKAGING	NHEEW	REMARKS

LOGISTICS CODE	NIIN/NOMENCLATURE	STOWAGE LOCATION	C OF MAT

Figure 4-16.—NAVSUP 1356, Ammunition Serial/Location Card (blue).

INVENTORY AND STOCK VALIDITY

Inventories are a way of verifying the accuracy of, or reconciling the difference between, your receipt and expenditure transactions. They also verify that stocks are maintained at allowance levels and are accurately recorded on the stock record cards. Ideally, each command should seek to achieve a 100 percent stock validity on each inventory conducted. This is accomplished by accurate and timely posting of receipts and expenditures to the stock record cards. Results of inventories are reported to COMOMAG each month, and a stock validity of 90 percent is acceptable. Anything less than this must reported with the reason(s) for the unacceptable validity and corrective actions taken to remedy the situation.

Types of Inventories

The term *inventory* is used to refer to the quantity of on-hand stock that is maintained on your stock record cards. A physical inventory of these items is required for proper inventory control. Other goals that should be accomplished during an inventory are as follows:

1. Reconcile differences between actual count and stock record count
2. Stop reoccurring discrepancies by effecting controls
3. Determine areas that need corrective action
4. Make sure material is correctly identified
5. Make sure material is properly stowed, packaged, and preserved

The rest of this section will be used to describe some of the inventories you will be involved with at your unit or detachment.

MONTHLY ONE-TWELFTH.—A physical inventory of 100 percent of on-hand stock must be completed each year. This inventory is done by preparing inventory cards and dividing them into 12 equal sections. One of these sections will be used to complete the inventory each month. You must remember to update the inventory cards as items are added to or deleted from your command's allowance.

used to verify previously conducted inventories, such as the monthly one-twelfth. The main random-sample inventory, all items in stock are eligible to be counted and must have an equal chance of being selected. The initial item will be selected from the first 20 cards and then every 20th card thereafter. In other words, if you should pick the 15th item, then after that you would pick the 35th, 55th, 75th, and so on.

SELECTED ITEM INVENTORY.—This inventory is designed to be used on certain fast-moving or frequently demanded items. This will test the readiness of your supply department by making sure there are sufficient quantities of material to build-up your unit/detachment weapons.

In addition to the above inventories, a completed inventory of any item will be held each time there is an issue or a receipt of that item. The results of this inventory will be noted in the upper right corner of the receipt document, or in block 11 of the NAVSUP 1250-1. When the transaction is posted to the stock record card, the inventory will be verified.

Recording Inventories

Once the inventory has been completed, all efforts must be made to correct any discrepancies before recording the results of the inventory. The results will be posted to the stock record cards in red ink, and all records will be maintained.

Material Lost/Gained by Inventory

When a physical count of material shows a quantity difference between the stock record card and the actual count, this is called a loss by inventory (LBI) or gain by inventory (GBI).

These losses or gains must be reviewed carefully to make sure the suspected loss or gain is valid and that later inventories will not show the count difference to be the same as the loss/gain made in a previous inventory.

Once the loss/gain has been verified and considered a minor difference, an adjustment NAVSUP 1250 is prepared in accordance with NAVSUP P-485, and the quantity difference is then posted to the stock record card. If it is decided that there is a major difference, it must then be determined if the material must be reported on a Missing, Lost, Stolen, or Recovered

INVENTORY PROCEDURES

Before the start of the inventory, all updated and receipt documents must be collected and posted to the stock record cards. A Quality Assurance inspector and a member from the supply department will review all discrepancies from the previous month to make sure they have been corrected. All of these discrepancies should be resolved, if possible. If they cannot be resolved, they will be recorded on a separate sheet of the inventory report and reasons given for why they were not corrected.

Since the inventories are conducted to make sure the stock and the stock records agree, it is extremely important that you conduct all inventories systematically and responsibly. Keep in mind the importance of a complete and accurate inventory in order to reduce errors. For each item to be inventoried, personnel involved must make sure of the following:

- Legibly identify each item by stock number, part number, MMC, or NALC.
- Check each item for proper packaging or condition.
- Carefully count each item and record it in on accurately on the count document.
- Correctly record the units of issue (ea, pr, bx).
- Attach a proper MIL-STD tag to each item with the correct identifying information.
- Record the actual location of the item on the count document.

This section does not cover all aspects of inventories. The use of NAVSUP P-485 and COMOMAGINST 4000.1 is essential in properly conducting your inventories.

MATERIAL IDENTIFICATION

As a supervisor, you must make sure that all items that are in stowage are legibly marked, tagged, or labeled with the appropriate nomenclature and identification numbers (NSN,NICN).

delays in issues and inventories.

MATERIAL LOCATION

The location of each item in stock is maintained in the supply department cardex. Each item is assigned a row, isle, or bin number. This item location number is maintained on the master stock-record card and is used for locating the material for issues, for inventories, and for stowing new material when received.

If for any reason it is deemed necessary to relocate material, you will need to make sure that the following actions are taken:

- The material is protected from loss or damage during the move.

- The material is properly stowed in the new location.

- The new location(s) is/are promptly and accurately recorded on the master stock-record card.

You must always remember that the accuracy of your stowage will reflect on your inventories and that the accuracy of your inventories will reflect on the condition of your supply department.

CONVENTIONAL AMMUNITION INTEGRATED MANAGEMENT SYSTEMS (CAIMS)

The primary goal of the supply system for Navy conventional ammunition is to provide rapid and efficient response to the operational requirements of the users of naval ammunition. This goal can only be achieved when you, the requisitioner, and the stocking points follow the standard procedures for preparation and transmission of requisitions and proper reporting procedures.

The Conventional Ammunition Integrated Management System (CAIMS) is an information system designed to provide a comprehensive and timely response to the readiness needs of the Navy. The system is based on the use of large-scale automated data processing equipment capable of providing immediate retrieval and daily updating of the conventional ammunition data base.

REPORTING (ATR)

Any action that affects the on-hand quantity of your commands reportable assets, such as issues, receipts, expenditures, or inventory losses or gains, will be reported using the ATR.

The method of processing ATR information into CAIMS requires that all pertinent instructions be followed exactly. CAIMS is the only authorized sole source of asset and expenditure information that is used by the CNO and the fleet Commanders in Chief for the logistical management of ammunition. If the ATR information is not accurate, the information received by higher echelon commands will not be accurate, and procurement and maintenance funding may be jeopardized. It is also the sole source of information used for execution of Operational Plans and Operational Orders.

Without accurate and prompt reporting by individual operating units and shore activities, procurement and maintenance funding will be severely hampered. The high cost and limited availability of ammunition requires all commands to provide continuous, intensive, and careful management of their assets.

All transaction reporting must be completed using SPCCINST 8010.12, CINCPACFLTINST 8010.12, AND CINCLANTFLTINST 8010.12 as appropriate to the location of your command. Commander Mobile Mine Assembly Group (COMOMAG), Commander Mine Warfare Command (COMINEWARCOM), and the Naval Mine Warfare Engineering Activity (NMWEA) should be addressed for information purposes on all transaction reports.

SUMMARY

This section on supply has covered a variety of information that is necessary for performing the functions of your supply department. From the identification and procurement to the inventory and reporting, it is your job to make sure that the proper steps are followed to keep track of and to account for your command's material and funds. The results of your efforts are demonstrated in the efficiency of your department.

REFERENCES

Afloat Supply Procedures, NAVSUP P-485, Rev 2, Naval Supply Systems Command, Washington, D.C., 1989.

Handling, Packaging, Storing, and Transportation of Underwater Mines and Destructors for Shore-Based/Shipboard Operations, SW023-AB-WHS-010, Naval Sea Systems Command, Washington, D.C., 1984.

Military Standard Transportation and Movement Procedures (MILSTAMP), Vol 1, Naval Supply Systems Command, Washington, D.C., 1987.

Mine Components A through C, Description and Class B Criteria, OP 4410, Vol 1, Naval Sea Systems Command, Washington, D.C., 1976.

Reporting of Missing, Lost, Stolen, or Recovered (M-L-S-R) Government Property, SECNAVINST 5500.4, Secretary of the Navy, Washington, D.C., 1988.

CHAPTER 5

MINE MAINTENANCE SYSTEM

The Mine Maintenance System is designed to make sure that all mine weapons systems are reliable and ready for immediate issue. The system is used to prevent equipment failures which might otherwise result in repeated corrective maintenance actions.

Upon completion of this chapter, you will be able to explain the different levels of mine maintenance, and discuss, describe, and explain the intermediate-level mine maintenance. You will also be able to discuss, describe, and explain the requirements for recording, reporting, and planning the maintenance on mines and associated equipment.

MINE MAINTENANCE LEVELS

The Mine Maintenance System is organized under the standard Department of Defense maintenance system, which contains three levels. All maintenance actions will be performed under one of these levels. In this section, we will discuss each level of maintenance as it applies to underwater mines and destructors. Because of the many tasks associated with the corrective maintenance of mines and associated equipment, you should refer to NAVSEA SW550-FO-PMS-010, *Underwater Mine Maintenance System*, appropriate mine assembly manuals, and assembly-level item, class B criteria manuals for additional information.

ORGANIZATIONAL-LEVEL MAINTENANCE

Organizational-level maintenance is the lowest level of maintenance and is performed by user organization on its assigned equipment. It consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. Except for mines Mk 60, Mk 65, and Mk 67, the following actions are considered organizational maintenance, regardless of who performs the task:

- Delivery of weapons to the planting vehicle
- Nonscheduled visual inspections
- Flight gear reorientation
- Safety device removal (safety pins, lanyards, etc.)
- Loading the delivery vehicle

Specific actions for the mines Mk 60, Mk 65, and Mk 67 organizational-level maintenance are limited to the following:

Mk 60 - Operational settings tests/changes
- Launch gear changes/repair/refurbishment, visual inspections, and cosmetic repair

Mk 65 - Operational settings only

Mk 67 - Fire control checks
- Visual inspections
- Weapon wipe down

Other types of maintenance are not performed by an organizational-level activity.

Mines in the custody of using organizations are relatively maintenance-free. Whether aboard ships or stations for specific minefield planning missions or for contingency purposes, mines are off-loaded if the mission is aborted or when programmed maintenance is required. As an exception, actions to change a mine's short-cycle maintenance period, in lieu of off-loading and performing programmed maintenance, are permitted when operational or tactical situations dictate. These actions must be approved by the operational commander in accordance with

NAVSEA SW550-FO-PMS-010 chapter 3, and performed by MOMAG personnel.

The organizational-level function of delivering surface- or submarine-laid mines pier-side for shipment in assembly configuration A is performed by shore-base activities. These mines normally do not require further assembly or maintenance, other than visual inspections, by personnel assigned to the using organization. The mines remain aboard only for the duration of a specific mission and are returned ashore for programmed maintenance if the mission is aborted or cancelled. Aircraft-laid mines are delivered to air stations for planting by shore-base aircraft, and returned to an intermediate-level mine assembly activity if the mission is aborted. For planting by carrier-base aircraft, mines delivered aboard may be accompanied by detachments of MOMAG teams. These teams, when required by operational commanders, will be equipped to complete final preparations or make operational setting changes to the mines before their release to carrier personnel who load the mines on aircraft. Again, such consignments are normally for the duration of a specific mining mission only; the mines require no maintenance for that duration except visual inspection. The mines are returned to an intermediate-level maintenance site if the mission is aborted or when programmed maintenance is required.

INTERMEDIATE-LEVEL MAINTENANCE

Intermediate-level maintenance is that performed by MOMAG activities responsible for providing direct and general support mine maintenance to using organizations. To the extent authorized by proper authority, intermediate maintenance consists of

- assembly, disassembly, maintenance, and testing of mines;
- testing, replacement, adjustment, alteration, and minor repair of assembly-level items;
- field calibration, adjustment, and repair of mine test equipment and tools;
- preservation;
- inspection;
- emergency fabrication of nonavailable parts, when so directed; and
- providing technical assistance to using organizations.

Although assembled mines are not repaired at any maintenance level, they are subject to intermediate-level programmed maintenance in which malfunctioning or worn assembly-level items may be adjusted, refurbished, or replaced by spares. In the course of such maintenance, piece parts that are subject to loss, damage, or wear may be replaced when they are listed in an activity's mine bills of material (MBOM). Replacing such items is considered minor repair.

DEPOT-LEVEL MAINTENANCE

Depot-level maintenance of mines includes the support of intermediate-level maintenance activities. Depots have more extensive industrial facilities and equipment than are available at intermediate-level activities. Depot-maintenance functions include repair, alteration, modification, modernization, overhaul, and rebuilding of assembly-level mine items, test equipment, and support equipment. Depot-level maintenance is not performed on assembled mines.

Depot maintenance is performed only at specific shore-base military or contracting facilities. Although depot-level maintenance, as applied to mine weapon systems, consists of component maintenance rather than weapon maintenance, intermediate-level functions that are performed ashore may be performed at depots. When that is done, the functions remain intermediate-level functions; that is, intermediate-level maintenance on depot-stored assembled mines may be performed at naval weapons stations. A depot may have MOMAG teams assigned in support of operational requirements. In that case, intermediate-level mine maintenance remains intermediate regardless of where it is performed.

PROGRAMMED MAINTENANCE

The basic purpose of the mine maintenance program is to ensure readiness and reliability of service-mine weapons systems. Required readiness, and thus the maintenance effort, depends upon the location of weapons and their intended use. Maintenance functions must be

planned and performed in such a way that ensures a state of readiness that satisfies planned weapon usage.

This section describes how the mine maintenance program applies to service mines in various configurations and to mine assembly-level items (such as components), and explains the maintenance program for such mines and items. The information presented does not pertain to the Mk 60 mine (CAPTOR), the Mk 65 (Quick Strike), or the Mk 67 (SLMM). Maintenance on these systems will be covered separately in this chapter.

NOTE

Because programmed maintenance intervals change, refer to NAVSEA SW550-AA-MMI-010, *Underwater Mine Maintenance System,* for any changes in maintenance intervals for mines, subassemblies, and assembly-level items.

Pre-positioned war-ready or war-reserve stocks (PWRS) of mines are maintained and stowed in one of the six degrees of assembly known as assembly configurations A, B, C, D, E, and F. These assembly configurations allow completely or partially assembled and tested mines to be assembled and/or issued to a mine-planting agent within the minimum amount of time specified by operational commanders. Operational commanders designate the configurations in which activities will maintain their mines, taking into consideration the operational requirements, facilities, and personnel available at the activities.

In order to maintain mines in a ready-for-issue (RFI) status, programmed maintenance must be performed. Programmed maintenance for mines is divided into two types (short-cycle and long-cycle) and consists of visual inspection, item replacement, component substitution, class B criteria, and/or class C testing.

SHORT-CYCLE MAINTENANCE

Short-cycle mine maintenance must be performed periodically on mines stored in assembly configurations A, B, or C. The purpose of short-cycle maintenance is to confirm the operability of mines stored in these configurations.

Under certain conditions, short-cycle maintenance may be required more frequently than specified in NAVSEA SW550-FO-PMS-010. Normally, a maintenance period will be short-cycled because of battery life limitations. In that event, the short-cycle maintenance is performed before the mine battery's life expires. Short-cycle maintenance should not be prolonged if the life of the battery has expired.

Mine assembly manuals outline short-cycle maintenance requirements and provide maintenance procedures for each specific mine. Generally, short-cycle maintenance consists of the following actions:

1. Disassembly of the mine to the point where the instrument rack is removed and the electrical connections of the anchor (if applicable) are accessible to perform the anchor test
2. Performance of instrument rack subassembly and anchor functional (class B) tests
3. Replacement of defective assembly-level items
4. Verification of the mine's battery life and replacement of batteries that will not support another short-cycle maintenance period
5. Performance of instrument rack subassembly and/or anchor subassembly functional tests, when appropriate, if any assembly-level items are replaced
6. Restoration of the mine case, mechanism section, explosive section, anchor and/or crate, as required
7. Reassembly of the mine to its assigned assembly configuration
8. Performance of assembled mine (class C) tests
9. Submission of appropriate maintenance reports

Assembly-level items that are used as replacements during short-cycle maintenance must have a PMS date that is the same or later than the due date of the mine in which the items are being installed. The reason for this requirement is that the mine's PMS date will have to be changed to that of the replacement item if an assembly-level item's PMS is due before the mine's PMS (long-cycle) date.

When the urgency of the situation dictates, operational commanders may extend the short-cycle maintenance period for mines afloat.

However, you must consider the following three factors to make this extension:

- The expected life of the mine
- The resistor plug installed in the sterilizer
- The storage-time factor of the batteries

To calculate the extended maintenance period for a mine, apply these factors to the following formula:

$$\text{Extended storage time} = X - Y \div Z$$

Where X = expected life (in months) of the mine,

Y = value (in months) of the resistor plug installed in the mine, and

Z = effective storage time factors of the mine batteries.

NOTE

If the result is less than 1, no extended time is allowed.

LONG-CYCLE MAINTENANCE

Long-cycle mine maintenance must be performed periodically on mines stored in assembly configurations A, B, C, D, E, and F. The purpose of the long-cycle maintenance is to confirm the operability of designated assembly-level items installed in these mines. Currently, the only mines authorized to be stored in assembly configuration F are the Mk 36, Mk 40, and Mk 41 destructors.

Mine assembly manuals provide disassembly procedures for each specific mine. NAVSEA SW550-AA-MMI-010 (C), *Mine Components A Through C Description and Class B Criteria*, designates which assembly-level items installed in a mine require long-cycle maintenance, and provides the class B criteria required.

Configuration A, B, and C Mines

Mines designated as assembly configurations A, B, or C contain batteries and require that short-cycle maintenance be performed in conjunction with long-cycle maintenance to confirm the operability of the mine. Generally, short-cycle and long-cycle maintenance are performed on these mines as follows:

1. Disassemble the mine to the point where the instrument rack is removed and the electrical connections of the anchor (if applicable) are accessible to perform the anchor test.
2. Conduct the instrument rack subassembly and anchor functional tests.
3. Troubleshoot and/or replace defective assembly-level items, if necessary, and repeat the functional tests.
4. Disassemble the instrument rack subassembly and the anchor.
5. Collect designated shelf-stowed assembly-level items required for the mine for class B criteria.
6. Perform class B criteria on designated assembly-level items.
7. Check the remaining life of the mine's batteries and replace the batteries that do not have sufficient life expectancy to support another short-cycle maintenance period.
8. Perform appropriate mine case inspection and/or case maintenance.
9. Reassemble and test the instrument rack subassembly and anchor.
10. Reassemble the mine to the appropriate assembly configuration.
11. Perform the assembled mine (class C) test.
12. Prepare and submit appropriate maintenance reports.

Configuration D and E Mines

In general terms, long-cycle maintenance is performed on configuration D and E mines as follows:

1. Disassemble the mine, instrument rack, and anchor (if applicable) by removing the assembly-level items.
2. Collect designated shelf-stowed assembly-level items required for the mine for class B criteria.
3. Perform class B criteria on designated assembly-level items.
4. Perform appropriate mine case inspection or case maintenance.
5. Reassemble and test the instrument rack subassembly.
6. Prepare and submit appropriate maintenance reports.

Remember, when performing long-cycle maintenance, the maintenance-due dates of all components installed in or designated for a mine must equal or exceed the maintenance schedule of the mine. If maintenance requirements of a component are due before the mine is rescheduled for long-cycle maintenance, the long-cycle maintenance of that mine will be shortened to match the component with the earliest maintenance-due date.

ASSEMBLY-LEVEL ITEMS

An assembly-level item is defined as a component that consists of one or more parts that are designed to function as an end item in a mine assembly.

Class B criteria must be performed on assembly-level items. Factors that influence the frequency include the design characteristics and functions of the items, shelf life of material used in the manufacture of the items, service history as determined by data reports generated by the various units and detachments, and the frequency of the programmed maintenance cycle of the weapons in which the items are used. Based on these factors, four categories of assembly-level items have been established and designated as maintenance groups. NAVSEA SW550-AA-MMI-010/(C) lists the maintenance groups and provides maintenance procedures for each assembly-level item.

Assembly-level items in the four maintenance groups designated or maintained as "spares" must receive the same maintenance items in assembled mines. Maintenance of spares may be performed at any time within the specified quarter at the discretion of the commanding officer or officer in charge.

Except in emergency situations, as discussed in mine maintenance and assembly manuals, assembly-level items must be subjected to class B criteria before they are installed in a mine. If a mine is upgraded for increased readiness or immediate planting, an assembly-level item that is within the long-cycle maintenance period may be installed in that mine without further tests. The maintenance cycle of the mine into which a tested spare has been installed does not change, and the spare component assumes the maintenance requirement of the mine.

Some mines that have been assembled may have to be downgraded (converted to a lower configuration) or completely disassembled, and the assembly-level items repackaged and returned to stock. In either case, when such items are returned to stock, they receive maintenance according to the maintenance group into which they fall. After maintenance has been accomplished, the items are repackaged in their original packing, if available.

NOTE

Items such as shorting clips, mine crates, and shipping containers should be retained onboard for use if the mine is downgraded.

If the original packing is not available and repacking instructions are not contained in OP 4118, request the instructions from NAVMINEWAENGRACT. Some assembly-level items such as arming wires, preformed packings, flat gaskets, and soluble washers that had been used on a mine must be discarded.

Items in all four maintenance groups must be given a receipt inspection at the time they are introduced into intermediate-level stocks. Specific requirements and procedures concerning receipt inspections are provided in QAP 100, *Naval Ordnance Quality Assurance Procedures for Fleet Activities*. The receipt-inspection requirements include, but are not limited to the following items:

- Palletized unit-loads are properly secured prior to off-loading.
- Identity, count, and weight of the material matches the shipping document.
- Visual inspection to make sure material was not damaged during shipping or handling.
- Visual inspection of packaging and preservation material to make sure items are suitable for further handling and storage.
- Visual inspection of explosive ordnance to make sure that no hazardous conditions are present.

In addition to a receipt inspection, some items must also be subjected to class B criteria.

Table 5-1 gives the maintenance requirements for the four maintenance groups.

NOTE

Depending on the time and personnel available, urgency of need, and other factors, the class B criteria, at the discretion of the CO or OIC, may be bypassed when a mine is assembled directly to assembly configuration A.

OTHER MAINTENANCE CYCLES

In this section, we discuss the maintenance of mines and assembly-level items that do not fall under the same maintenance levels and schedules as the mines that were previously discussed.

Destructor Kit Mk 75

The Destructor or DST Kit Mk 75 is used in the DST Mk 36, 40, 41, and the M117D Mk 59. These kits are subject to class B criteria at a 48-month interval. But the Firing Mechanism Mk 42 must be class B tested within 24 months of the plant/issue date. All mine sites that have an allowance for DST kits should make sure that enough kits are kept within the 24-month cycle to meet any requests made for the kits.

Conversion Kit Mk 130

The Mk 130 Conversion Kit is used in the mines Mk 62, 63, and 64. These kits are subject to class B criteria at 60-month intervals. Unlike the DST, however, this testing is for the full 60 months on all components, including the Target Detecting Device (TDD), and can be issued any time during the kit's 60-month cycle.

Table 5-1.—Assembly-level Item Maintenance Requirements

GROUP NO.	MAINTENANCE REQUIREMENTS
1	Subject to class-B criteria at time of long-cycle maintenance
2	Subject to class-B criteria in conjunction with receipt inspection
3	Subject to class-B criteria before installation
4	Receipt inspection only, per QAP 100

Underwater Mine Mk 60

As stated earlier in this chapter, the Mk 60 does not fall under the normal categories of maintenance levels as other mines. The Mk 60 is maintained under a modified organizational, intermediate, and depot maintenance program. The levels are described in the following paragraphs:

1. **Organizational-level.** This level is accomplished at the pre-positioned site and planting agents. Maintenance is limited to the following:
   a. Operational setting tests/changes
   b. Launch gear changes/repair/refurbishment
   c. Visual inspection and cosmetic repair

No programmed or any type of corrective maintenance is allowed by the pre-positioned sites or planting agents.

2. **Intermediate-level.** This level is performed by one specified unit located at NWS Yorktown, Virginia. All corrective maintenance and turnaround maintenance are performed at this location.

3. **Depot-level.** This level is also located at NWS Yorktown, Virginia, and performs all those tasks on the Mk 60 that cannot be accomplished at the intermediate-level.

The maintenance cycle for the Mk 60 is currently established at 4 years. However, from fleet input and a data base built from regular cycles of testing, it is expected to increase to 5 years.

Underwater Mine Mk 65

The Mk 65 is maintained under a modified organizational-, intermediate-, and depot-level maintenance program. The levels are as follows:

1. **Organizational-level.** This is the pre-positioned, and designated-planting-agent level. Programmed and corrective maintenance are not permitted unless authorized personnel are provided. External cosmetic repair is authorized.

2. **Intermediate-level.** This is accomplished by the designated agents, normally MOMAG units and detachments that are authorized to perform all programmed and corrective maintenance.

3. **Depot-level.** This activity accomplishes all repair of components and special-purpose test equipment and is located at NWS Yorktown, Virginia.

The maintenance cycles for the Mk 65 have been established at 30 months for short-cycle maintenance and 60 months for long-cycle maintenance. The short-cycle maintenance could be less than 30 months, depending on the remaining life of the battery installed in the mine.

Underwater Mine Mk 67

The mine Mk 67 is also maintained under a modified organizational-, intermediate-, and depot-level maintenance program. The levels are as follows:

1. **Organizational-level.** This level is the designated planting agents, and organizational-level maintenance is not required except for existing requirements for the Mk 37 torpedo. These requirements include fire control checks, visual inspection, and weapon wipedown.

2. **Intermediate-level.** This is accomplished by the designated agents, normally MOMAG units and detachments that are authorized to perform all programmed and corrective maintenance.

3. **Depot-level.** This level of maintenance is performed by two authorized activities. The responsibilities for maintenance of the Mk 67 are as follows:

a. NWS Yorktown, Virginia, is responsible for performing maintenance on items that are designated as "mine-peculiar components."

b. Naval Undersea Warfare Engineering Station (NAVUSEAWARENGSTA), Keyport, Washington, is responsible for performing maintenance on items that are designated as "torpedo-peculiar components."

The maintenance cycles for the Mk 67 have been established at 30 months for short-cycle maintenance, configuration A and C, and 60 months for long-cycle maintenance.

RECORDING AND REPORTING MAINTENANCE

All programmed mine maintenance actions are reported to NAVMINEWARENGACT and become a part of the data base for the computerized central mine data system. The information obtained from these reports is used for analysis of the mine maintenance system so that improvements to the existing assembly, maintenance, and test procedures can be made. This information is also beneficial in making engineering changes in component design, which will give improved operational capability.

Programmed maintenance is reported to NAVMINEWARENGACT using six different forms. Four of these forms are identified as supplements to NAVSEA SW550-FO-PMS-010, *Underwater Mine Maintenance System.* The other two forms are the Metrology Equipment Recall and Report (METER cards) and the Shore Activity Maintenance Data Collection System (SAMDCS). In this section you will learn about the different maintenance forms and how they are used.

MINE SYSTEM OSR DATA REPORT

The Mine System OSR Data Report form is better known as the supplement A. It is used by depot-level maintenance activities to report the following types of actions:

- Overhaul, screening, and repair (OSR)
- Ordnance alterations (ORDALT)
- Mine-engineering-field-changes (MEFC)

This form is also used at intermediate-level maintenance activities to report ORDALTs and MEFCs. When these actions are being performed on the Mk 60 mine or its related components, the

"Passed Only" sections of this form are used (figures 5-1A and 5-1B).

MINE SYSTEM CLASS-B DATA REPORT

The Mine System Class-B Data Report form is better known as the supplement B (figures 5-2A and 5-2B). It is used to report the results of tests and inspections performed at intermediate-level maintenance activities on assembly-level items and on subassemblies under the following conditions:

- Long-cycle maintenance on only those items in maintenance group one that

NAVSEA SW550-FO-PMS-020 SUPPLEMENT A 15 MAY 1983
MINE-SYSTEM OSR DATA REPORT

TO: OFFICER-IN-CHARGE
NAVAL MINE WARFARE ENGINEERING ACTIVITY
YORKTOWN, VIRGINIA 23691

SHEET ___ OF ___

SHORE ACTIVITY MAINTENANCE DATA COLLECTION SYSTEM
UWS UNDERWATER MINES NAVSEA 4790/5 (5A)

FROM (activity)

PERFORMING TECHNICIAN/SUPERVISOR | RATE

COMMAND APPROVAL (signature)

REPORT SYMBOL: 4790/5 (5A)

COMPONENT INFORMATION SECTION

REPORTING ACTIVITY	REPORT SERIAL	REPORT DATE (M M D D Y Y)	COMPONENT NAME	MK	MOD	MMC/EIC	M D	TEST REFERENCE

PASSED ONLY – LOTS

LOT NO.	QUANTITY	LOT NO.	QUANTITY	LOT NO.	QUANTITY	LOT NO.	QUANTITY

PASSED ONLY – SERIAL NUMBERS. (ONE SERIAL NO. PER BLOCK)

Figure 5-1A.—Mine System OSR Data Report form.

NAVSEA SW550-FO-PMS-030 SUPPLEMENT A 15 MAY 1983

Continuation Sheet ___ of ___

REPORTING ACTIVITY _____ REPORT SERIAL NO. _____ REPORT DATE _____
(FROM SHEET 1)

SERIAL NUMBER	C C	POINT-OF-FAILURE QTY	PAGE	PARA	STEP	REPLACED PARTS DATA REF. DESIG.	ITEM NAME	QTY	MMC	ADJ

REMARKS

SERIAL NUMBER	C C	POINT-OF-FAILURE QTY	PAGE	PARA	STEP	REPLACED PARTS DATA REF. DESIG.	ITEM NAME	QTY	MMC	ADJ

REMARKS

SW550-FO-PMS-040 SUPPLEMENT B 15 MAY 1983
MINE SYSTEM CLASS B DATA REPORT

SHEET ____ OF ____

FOR NAVMINEWARENGACT USE ONLY

TO: OFFICER-IN-CHARGE
NAVAL MINE WARFARE ENGINEERING ACTIVITY
YORKTOWN, VIRGINIA 23691

FROM: ACTIVITY

PERFORMING TECHNICIAN (PRINT)	RATE	QA INSPECTOR (SIGNATURE)	COMMAND APPROVAL (SIGNATURE)

1. REPORTING ACTIVITY _____
2. REPORT SERIAL NO. _____
3. REPORT DATE _____
4. PUBLICATION NUMBER _____
5. VOLUME _____
6. PART _____
7. REVISION _____
8. CHANGE _____
9. JOB SHEET NO. _____
10. FUNCTION CODE _____ **FC 04 REMARKS** _____
11. MMC NO. _____
12. BATTERY CODE ___/___/___ MO YR MO/10
13. ITEM NAME _____
14. MK _____
15. MOD _____
16. QUANTITY PASSED _____
17. **QUANTITY PASSED AFTER ADJUSTMENT** _____
18. **QUANTITY PASSED AFTER REPAIR**[1] _____
19. QUANTITY FAILED[1] _____
20. **TOTAL QUANTITY TESTED FOR THIS REPORT** _____
21. SUBASSEMBLY TEST REPORT SERIAL NUMBER.[2] _____

[1] *To report quantity "failed" or "passed after repair" use Supplement B continuation sheet. DO NOT INCLUDE ITEMS IN "QUANTITY PASSED OR "QUANTITY PASSED AFTER ADJUSTMENT" ON CONTINUATION SHEET.*
[2] *Enter subassembly test report serial number in item 21 when reporting test results of components suspected of causing subassembly to fail.*

Figure 5-2A.—Mine System Class-B Data Report form.

SW550-FO-PMS-050 SUPPLEMENT B 15 MAY 1983
CONTINUATION SHEET _____ OF _____

REPORTING ACTIVITY _____ (FROM SHEET 1)
REPORT SERIAL NO. _____
REPORT DATE _____

SERIAL NO.	FC	POINT OF FAILURE			PIECE PART MMC	TEST EQUIPMENT SERIAL NO.	QTY	REMARKS
		PAGE	PARA	STEP	REPLACED			

Figure 5-2B.—Mine System Class-B Data Report form (Continuation).

require supplement B (see NAVSEA SW550-AA-MMI-010 (C))

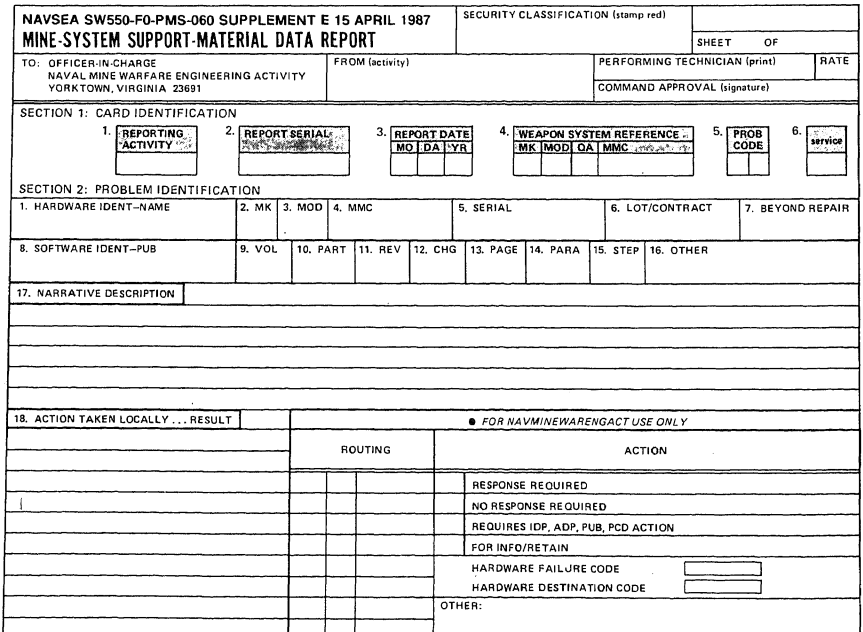
- Assembly-level items before installation/issue, but only those in maintenance group three that require supplement B (see NAVSEA SW550-AA-MMI-010 (C))
- Damage to explosive items as a result of handling while in storage. An accident investigation report is also required as prescribed in OPNAVINST 5102.1.

MINE SYSTEM SUPPORT MATERIAL DATA REPORT

This form is better known as the supplement E (fig. 5-3). It is used at the intermediate-level to report maintenance actions not covered by the supplement B. The supplement E was designed to report the following actions:

- Assembly-level items rejected at long-cycle maintenance, but only those items in maintenance group one that require the use of a supplement E (see NAVSEA SW550-AA-MMI-010 (C))
- Assembly-level items that failed class-B criteria before installation/issue, but only those items in maintenance group three that require the use of a supplement E (see NAVSEA SW550-AA-MMI-010 (C))
- Problems encountered with improper packaging, nomenclature, and labeling
- Damage to handling equipment, tools, and facilities
- Safety, logistics, and any other problem not covered by the supplement B.

Instructions for the use of the supplements mentioned previously are provided on their reverse side or on their continuation sheets. Amplifying instructions are provided in



NAVSEA SW550-F0-PMS-060 SUPPLEMENT E 15 APRIL 1987
MINE-SYSTEM SUPPORT-MATERIAL DATA REPORT

SECURITY CLASSIFICATION (stamp red)

SHEET OF

TO: OFFICER-IN-CHARGE
NAVAL MINE WARFARE ENGINEERING ACTIVITY
YORKTOWN, VIRGINIA 23691

FROM (activity)

PERFORMING TECHNICIAN (print) RATE

COMMAND APPROVAL (signature)

SECTION 1: CARD IDENTIFICATION

1. REPORTING ACTIVITY
2. REPORT SERIAL
3. REPORT DATE MO DA YR
4. WEAPON SYSTEM REFERENCE MK MOD QA MMC
5. PROB CODE
6. service

SECTION 2: PROBLEM IDENTIFICATION

1. HARDWARE IDENT–NAME	2. MK	3. MOD	4. MMC	5. SERIAL	6. LOT/CONTRACT	7. BEYOND REPAIR

8. SOFTWARE IDENT–PUB	9. VOL	10. PART	11. REV	12. CHG	13. PAGE	14. PARA	15. STEP	16. OTHER

17. NARRATIVE DESCRIPTION

18. ACTION TAKEN LOCALLY . . . RESULT

● *FOR NAVMINEWARENGACT USE ONLY*

ROUTING	ACTION
	RESPONSE REQUIRED
	NO RESPONSE REQUIRED
	REQUIRES IDP, ADP, PUB, PCD ACTION
	FOR INFO/RETAIN
	HARDWARE FAILURE CODE
	HARDWARE DESTINATION CODE
	OTHER:

NAVSEA SW550-FO-PMS-010 and take precedence in the event a conflict may exist.

Supplements B and E Message Formats

Message formats for supplements B and E sheets are provided in SW550-FO-PMS-010 and should be used to report critical defects and failures in mine components. These messages are sent to NAVMINEWARENGACT, and the material in question is retained on board until such time as disposition instructions are received.

NOTE

NAVSEA Form 9086/10, *Technical Manual Deficiency/Evaluation Report (TMDER)* (fig. 5-4) is used to report technical manual errors, vice the supplement E.

(Insert Classif. of TMDER Here and At Bottom of Page) **CLASSIFICATION:**

NAVSEA (USER) TECHNICAL MANUAL DEFICIENCY/EVALUATION REPORT (TMDER)
(NAVSEA S0005-AA-GYD-030/TMMP & NAVSEAINST 4160.3)

INSTRUCTIONS: Insert classification at top and bottom of page. Read the following before completing this form. Continue on 8½" × 11" paper if additional space is needed.

1 USE THIS REPORT TO INDICATE DEFICIENCIES, USER REMARKS, AND RECOMMENDATIONS RELATING TO PUBLICATION
2 BLOCKS MARKED WITH "*" ARE TO BE FILLED IN BY THE CONTRACTOR BEFORE PRINTING
3 FOR UNCLASSIFIED TMDER'S, FILL IN YOUR RETURN ADDRESS IN SPACE PROVIDED ON THE BACK, FOLD AND TAPE WHERE INDICATED AND MAIL (SEE OPNAVINST 5510.1E FOR MAILING CLASSIFIED TMDERS).
4 FOR ADDITIONAL INFORMATION, CALL AUTOVON 360-4805-5084 OR COMMERCIAL 805 982-4805 5084

1 NAVSEA NO. *	2 VOL PART *	3. TITLE *

4 REV. DATE OR TM CH DATE	5. SYSTEM/EQUIPMENT	6. IDENTIFICATION/NOMENCLATURE (MK MOD AN)

7 USER'S EVALUATION OF MANUAL (*Check Appropriate blocks*)

A EXCELLENT		B GOOD		C FAIR		D POOR		E COMPLETE		F INCOMPLETE

8 GENERAL COMMENTS

9. RECOMMENDED CHANGES TO PUBLICATION

PAGE NO A	PARAGRAPH B.	LINE NO C.	FIG. NO. D.	TABLE E.	F. RECOMMENDED CHANGES AND REASONS

10 ORIGINATOR AND WORK CENTER (PRINT)	11 ORIGINATOR'S RANK, RATE OR GRADE AND TITLE	12. DATE SIGNED
13 SIGNATURE OF WORK CENTER HEAD	14 SIGNATURE OF DEPARTMENT OFFICER	15 AUTOVON COMM NO

16 SHIP HULL NO. AND OR STATION ADDRESS (DO NOT ABBREVIATE)

17 THIS SPACE ONLY FOR NSDSA

A CONTROL NO	B CDG ISEA	C DATE			D PRIORITY	E TRANSMITTED TO
		RECEIVED	FORWARDED	DUE		

NAVSEA 9086/10 (REV. 6-83) S/N 0116-LF-090-8631 **CLASSIFICATION:**
(REPLACES 4-84 EDITION & NAVSEA 4160/1)

Figure 5-4.—Technical Manual Deficiency/Evaluation Report (TMDER) form.

MINE MK 60 ASSEMBLY REPORT

The Mine Mk 60 Assembly Report, supplement F (fig. 5-5), is used to report and document the serial number and the lot numbers of components or assemblies removed and replaced in the Mk 60 mine.

SIGNAL PROGRAMMER ASSEMBLY/ DISASSEMBLY RECORD

The Signal Programmer Assembly/Disassembly Record (fig. 5-6), Supplement J, is used to report and document the serial number of the

NAVSEA SW550-F0-PMS-070 SUPPLEMENT F 15 JULY 1987
MINE MK 60 ASSEMBLY REPORT

PERFORMING TECHNICIAN/SUPERVISOR _____ RATE _____

COMMAND APPROVAL (signature) _____

UPPER CASE SERIAL	MINE MK	MINE MOD	MINE OA	CONDITION CODE	REPORT DATE MO	REPORT DATE DAY	REPORT DATE YR	MAINTENANCE DUE DATE MO	MAINTENANCE DUE DATE DAY	MAINTENANCE DUE DATE YR	DASH	CCM	BUOY ID
				TO							TO		

DESCRIPTION	INSTALLED	REMOVED	CONDITION	COMMENTS
CASE ASEMBLY, UPPER				
CABLE ASSY CA-1165				
BUOY (SERIAL)				
HYDROGEN GETTER DOOR				
HYDROGEN GETTER PROP HOUSING				
TORPEDO MK 46				
HOUSING, PROPELLER				
VALVE, HYDRAULIC, EXPLOSIVE MK 8, UPPER				
SIGNAL PROGRAMMER MK 8				
AMPLIFIER, POWER MK 165				
AMPLIFIER, POWER MK 166				
CABLE ASSY CA-1155				
CABLE ASSY CA-1157				
CABLE ASSY CA-1158				
CABLE ASSY CA-1159				
CABLE ASSY CA-1160				
POWER SUPPLY, BATTERY MK 153				
STERILIZER ELEC ASSEMBLY MK 13				
POWER SUPPLY, BATTERY MK 154				
CASE ASSEMBLY, LOWER				
SWITCH, SEPARATION MK 141				
SWITCH, PRESSURE MK 140				
SENSOR, LOWER, ASSY MK 13				
VALVE, HYDRAULIC, EXPLOSIVE MK 8, LOWER				
ANCHOR MK 60				
INITIATOR, HYDROSTATIC MK 15				
INITIATOR, HYDROSTATIC MK 16				
ACTUATOR, EXPLOSIVE STAB MK 26				
PACK ASSY, PARACHUTE MK 42				
RELEASE, BUOY MK 42				
ACTUATOR, BAND MK 27				
CABLE ASSY CA-1162				
CABLE ASSY CA-1163				
CABLE ASSY CA-1164				
CABLE ASSY CA-1161				
VALVE, VENT MK 7				
SENSOR, UPPER, ASSY MK 14				
SOURCE MK 11				
DETONATOR ASSEMBLY MK 57 (CA-1157)				
DETONATOR ASSEMBLY MK 57 (CA-1165)				
FLOTATION AND GUIDE SEGMENT 3137881				
FLOTATION AND GUIDE SEGMENT 3137882				
TRANSDUCER, PRESSURE 3139360				
SWITCH, PRESSURE				
CABLE ASSY CA-1237				
STRAP ASSY, FWD				
STRAP ASSY, AFT				

Figure 5-5.—Mine Mk 60 Assembly Report form.

SW550-F0-PMS-100 SUPPLEMENT J 15 JULY 1987

SIGNAL PROGRAMMER ASSEMBLY/DISASSEMBLY RECORD

Check One of the Following ACTIONS

Repair _____ Disassembly _____ Assembly _____

	IN		OUT
Date	_____	Date	_____
Mod	_____	Mod	_____
Dash	_____	Dash	_____
CCM	_____	CCM	_____
Condition Code	_____	Condition Code	_____

	S/N RECEIVED	S/N REMOVED	CC REMOVED	S/N ADDED
Adapter	_____	_____	_____	_____
Power Supply (Ring 1)	_____	_____	_____	_____
Command Control (Ring 2)	_____	_____	_____	_____
Detector (Ring 3)	_____	_____	_____	_____
Receiver (Ring 4)	_____	_____	_____	_____
Tracker Assembly (Ring 5)	_____	_____	_____	_____
Processor Assembly (Ring 6)	_____	_____	_____	_____
Torpedo Programmer (Ring 7)	_____	_____	_____	_____

TEST FAILURES/DESCRIPTION: _____

INITIAL FAILURE VERIFIED (Check One): _____ Yes _____ No

NARRATIVE/REMARKS: _____

DEGREASING PERFORMED (Enter Ring Number(s)): _____ Date _____

RING 5 ADJUSTED AND STENCILED (Check One): _____ Yes _____ No

LIST ALL ORDALTS PERFORMED: _____

PERFORMED BY: _____ Signature

Q/A PERFORMED BY: _____ Signature /Date

Figure 5-6.—Signal Programmer Assembly/Disassembly Report form.

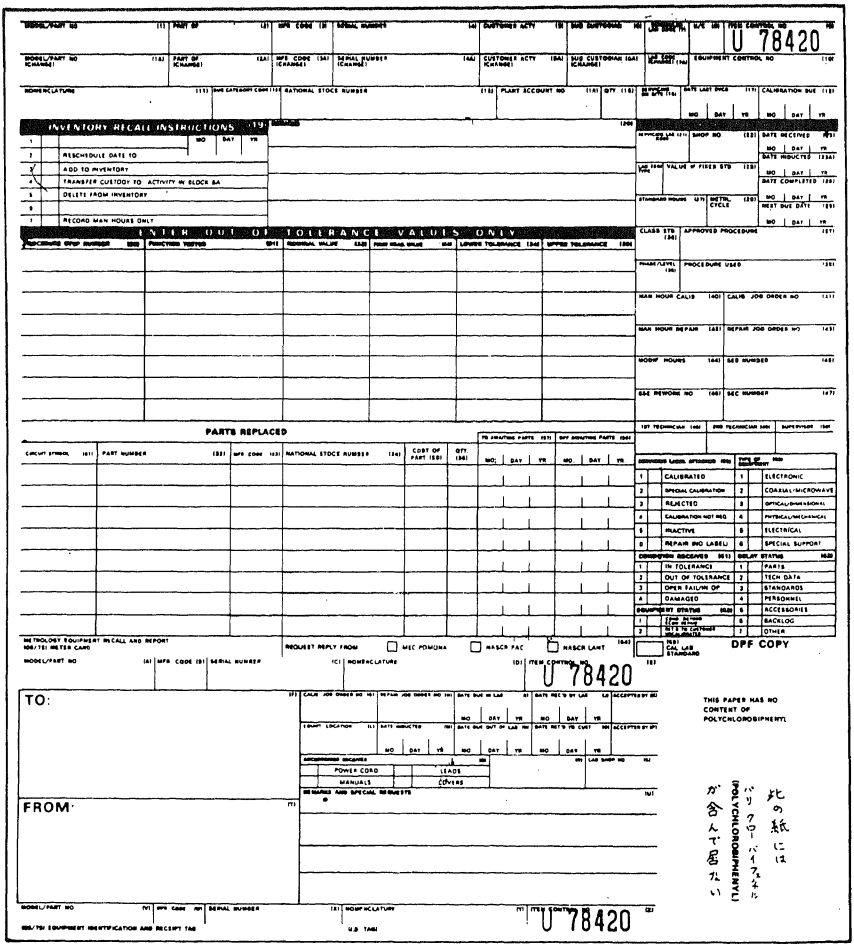


Figure 5-7.—Metrology Equipment Recall and Report form.

signal programmers assembled or disassembled in the Mk 60 mine.

METROLOGY EQUIPMENT RECALL AND REPORT (METER)

The Metrology Equipment Recall and Report (fig. 5-7), is used to report test-equipment failure, torque-wrench failure, calibrations, and repairs attempted or accomplished. This report is normally submitted by the test-set repair technician (NEC 1201). For instructions on submission of this report, refer to OPNAV 43P6, *Users Manual*.

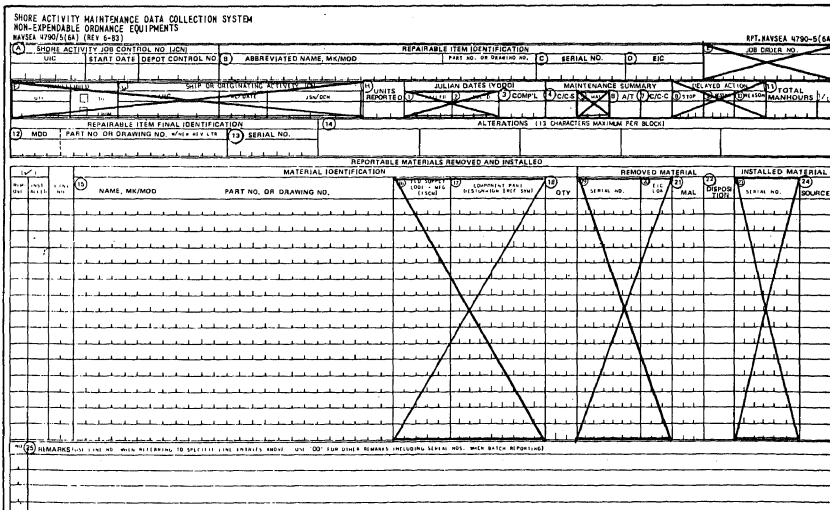
SHORE ACTIVITY MAINTENANCE DATA COLLECTION SYSTEM (SAMDCS)

All activities performing depot-level and intermediate-level maintenance on weapons containers and handling equipment must submit a completed SAMDCS, NAVSEA Form 4790/5(6A), (fig. 5-8). This report must be submitted at least once a month to the weapons station in Concord, California. This report documents maintenance and repair actions on nonexpendable ordnance equipment such as mine crates, skids, and weapons dollies. NAVSEA SW550-FO-PMS-010 chapter 6 lists equipment that requires SAMDCS reports.

ASSEMBLY/MAINTENANCE MASTER RECORD

Although the assembly/maintenance master record form is not used in the computerized Central Mine Data System, it needs to be discussed in this section.

The assembly/maintenance master record is better known as the master record sheet or supplement G for service subassemblies and mines



(fig. 5-9), and the supplement H for service Quickstrike and DSTs (fig. 5-10). This form is used by mine-assembly personnel at the intermediate-maintenance level to provide data on mines and subassemblies and to record the operational settings that apply. The master record sheet will be used under the following conditions:

- On mines that are upgraded to configurations A, B, or C, to show the operational settings
- For each of the subassemblies the mine was upgraded from
- To record serial numbers of installed components
- Maintenance actions that have been applied to subassemblies that are stored in configuration D and E

The MRS for a mine in configuration A, B, or C, is referred to as the "mine MRS"; all others are referred to as "sub-assembly MRSs".

MAINTENANCE SCHEDULES

One of the most important tasks that you, as a supervisor, will be concerned with is the maintenance of mines and associated equipment. In most situations, you will be involved only with the supervision of maintenance. However, under some situations, you may be required to develop or revise mine maintenance schedules.

Except for the format, no established ground rules are available for developing or revising maintenance schedules. Each MOMAG activity has its own problems or situations concerning assigned weapons. However, a supervisor of a maintenance work center and a person developing

CONFIDENTIAL (When Mine Setting Code strip is attached)

XPL SECT/MECH SECT MTCHD Ser Nos: _____/_____
PRESS DET/FIR MECH MTCHD Ser Nos: _____/_____

UIC: _____ Lot No: _____

MEFC No: _____ DATE: _____
MEFC No: _____ DATE: _____
MEFC No: _____ DATE: _____

SW550-FQ-PMS-080 SUPPLEMENT G 15 JULY 1987
ASSEMBLY/MAINTENANCE MASTER RECORD
FOR SERVICE SUBASSEMBLIES AND MINES

MINE SETTING CODE (FROM MINE SETTING SHEET FOLDER)

MINE NUMBER	MK/MOD	QA	STERILIZE OR S D	DA/OR (DAYS, HRS, MIN)	SHIP COUNT	LP	ICDP	IN-OUT	SENS	SENS	SENS	ILDP	PLANT DEPTH	CASE DEPTH	NOTE	FIELD NO.	CHANGE	OPTIONAL
1	3	4	5	6	7	8	9	10	11-M	11-A	11-P	12	13	14	15	16	17	18

(All actions performed IAW applicable pubs)

ITEM	SERIAL NUMBER	MK	MOD	QA	WEAPON CONFIG	LONG CYCLE	SHORT CYCLE	ACTION	DATE	SUPERVISOR	QA INSPECTOR

Explosive Devices Serial/Lot Numbers

BATTERY MK ____ EFFECTIVE LIFE* ____ MONTHS AS OF ____ (DATE)
BATTERY MK ____ EFFECTIVE LIFE* ____ MONTHS AS OF ____ (DATE)
BATTERY MK ____ EFFECTIVE LIFE* ____ MONTHS AS OF ____ (DATE)
BATTERY MK ____ EFFECTIVE LIFE* ____ MONTHS AS OF ____ (DATE)

XPL ACTR MK 18 _____
XPL DRVR MK 4 _____
XPL DRVR MK 2 _____ _____ _____

PISTON _____
PRPLT ASSY _____

or revising a maintenance schedule have certain things in common. Each must have a thorough knowledge of the tasks involved, of time and materials required, and of personnel capabilities.

When preparing a maintenance schedule, you must know

1. the types of weapons involved and special problems associated with each type;
2. projected operational commitments and inspections;
3. training requirements;
4. availability of special material required; and
5. other scheduled requirements.

MINE MAINTENANCE SCHEDULES

Three basic types of mine maintenance schedules are required for service material. Each schedule pertains to a specific type of maintenance. Information concerning the requirements of mine maintenance schedules is contained in NAVSEA SW550-FO-PMS-010, NAVSEA SW550-AA-MMI-010 (C), and COMOMAG-INST 8550.4, *Service Mine Maintenance Workload Schedules.*

Long-Cycle Maintenance Schedules

MOMAG activities stockpiling service weapons must prepare a long-cycle mine maintenance schedule. This schedule must include all service weapons, instrument rack subassemblies, assembly-level items, and spares that require long-cycle maintenance.

The maintenance schedule is divided into 24 calendar-year quarters. Each quarter contains a proportional number of mines and subassemblies. The mines are identified by a minimum of a

CONFIDENTIAL (When Mine Setting Code strip is attached)

UIC: _____ Lot No: _____

SW550-FO-PMS-090 SUPPLEMENT H 15 JULY 87
ASSEMBLY/MAINTENANCE MASTER RECORD
FOR SERVICE QUICKSTRIKE AND DST1

MEFC No: _____ DATE _____
MEFC No: _____ DATE _____
MEFC No: _____ DATE _____

MINE SETTING CODE (FROM SETTING SHEET FOLDER)

MINE NO.	MK/ MOD	OA	PRESET PROGRAMMER SETTINGS												NOTE	FIELD NO.	OPTIONAL	HI-LO ALTITUDE
			SELECTORS				SWITCHES				INDICATORS							
			1	2	3	4	1	2	3	4	1	2	3	4				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

(All actions performed IAW applicable pubs)

ITEM	SERIAL NUMBER	MK	MOD	OA	WEAPON CONFIG	LONG CYCLE	SHORT CYCLE	ACTION	DATE	SUPERVISOR	QA INSPECTOR

Subassembly & Explosive Devices Serial/Lot Numbers

BTRY MK _____ MOD _____
BTRY ACTIVATED _____

ARM OVC MK _____ MOD _____, _____
AOPTR MK _____ MOD _____, _____

Classified by: _____

To provide a more predictable workload, the quarterly section of a long-cycle mine maintenance schedule may be divided into monthly schedules. A monthly schedule may be proportionally divided by the type and/or quantity of weapons requiring maintenance. If necessary, the monthly workload schedule may be further divided into weekly schedules.

Activities preparing or revising a long-cycle maintenance schedule for mines must forward a copy of the schedule to the Commander, Mobile Mine Assembly Group.

Maintenance Extensions

The Mk 52 and Mk 55 explosive-loaded mine cases and the explosive section of the Mk 56 mine are subject to class-B criteria every 6 years when they are assembled to configurations D and E. However, a 10 percent random sample of a maintenance lot can be performed. If one reject of the sample is found in the maintenance lot, the entire lot in which the reject was found must be subjected to class-B criteria. If all the items in the random sample meet the inspection criteria, the maintenance cycle for that lot may be extended for another 6 years. Refer to NAVSEA SW550-AA-MMI-010 (C) maintenance tables for the proper identification of the items that must pass the inspection criteria.

Short-Cycle Maintenance Schedules

In addition to a long-cycle mine maintenance schedule, short-cycle mine maintenance schedules must be prepared for mines requiring short-cycle maintenance. A short-cycle mine maintenance schedule indicates when configuration A, B, or C mines require battery-life verification, battery changes, and/or operational tests.

A short-cycle mine maintenance schedule, similar to a long-cycle mine maintenance schedule, should be prepared by each activity. The schedule is divided into an equal number of calendar-year quarters. Each quarter indicates the mines scheduled for short-cycle maintenance.

specific year and is divided into 12 monthly segments. The scheduled maintenance must be performed within the established period of time following the previous maintenance period. However, if the battery life of a mine will not support a full short-cycle maintenance period, the maintenance cycle must be reduced to the battery-life period. On a short-cycle mine maintenance schedule, mines are identified by codes identical to those on the long-cycle mine maintenance schedule.

Short-cycle maintenance schedules must be updated annually. A copy of the schedule is forwarded to COMOMAG.

Unscheduled Maintenance

Unscheduled maintenance and commitments, because of their nature and rate of occurrence, cannot be included in scheduled maintenance plans. Unscheduled maintenance may include screening of specific items for suspected problems as directed by higher authority. Since the accomplishment of unscheduled requirements may consume a large portion of maintenance man-hours, it is important that time be allotted for unscheduled maintenance or commitments when maintenance schedules are developed.

SUMMARY

In this chapter, you have seen how the various levels of mine maintenance apply to the different types of mines, subassemblies, and assembly-evel items. You have seen that most of the programmed mine maintenance is performed at the intermediate-level, which is normally at a MOMAG activity. You have seen the various maintenance forms and how they are used to report the different actions taken on the mines during programmed long-cycle, and short-cycle maintenance. It is now your job as the supervisor to ensure that all programmed maintenance is carried out as efficiently as possible. You must make sure that all forms are completed and filled in properly. But, most important is ensuring that

all references and instructions are followed and up to date.

REFERENCES

Handling, Packaging, Storing, and Transportation of Underwater Mines and Destructors for Shore Based/Shipboard Operations, NAVSEA SW023-AB-WHS-010, Naval Sea Systems Command, Washington, D.C., 1 February 1984.

Mine Components A through C, Description and Class B Criteria, SW550-AA-MMI-010/(C), Naval Sea Systems Command, Washington, D.C., 15 September 1988.

Underwater Mine Maintenance System, NAVSEA SW550-FO-PMS-010, Naval Mine Warfare Engineering Activity, Yorktown, Va., 1 November 1983.

Naval Ordnance Quality Assurance Procedures for Fleet Activities, Naval Sea and Naval Air Systems Commands, Washington, D.C., 1 December 1976.

CHAPTER 6

ADMINISTRATIVE FUNCTIONS

As a senior petty officer, you will find that your assignments are now more related to supervisory and administrative functions. For you to be able to complete these functions properly, you must be able to understand what is required of you.

In this chapter, we will cover the administrative functions of a MOMAG activity. Upon completion of this chapter, you will be able to discuss the types of naval correspondence, to maintain technical manuals, and to describe work order procedures. You will also be able to list the requirements for and describe the applications of automated data processing equipment, along with care and maintenance, and the security of hardware and software.

NAVAL CORRESPONDENCE

Naval correspondence covers a broad spectrum of material. This material can range from a simple memorandum to naval letters and messages. In this section we will discuss the standard naval letter, directives, messages and security classifications, and handling requirements for classified information.

STANDARD NAVAL LETTER

Official letters within the Navy are prepared in a specific naval format. This format is also used when writing to agencies of the government, Department of Defense or the Coast Guard. The rules for preparation and parts of a naval letter are discussed in the following paragraphs.

Stationery

Letterhead stationery of the activity originating the correspondence is used for the first page of a naval letter.

Consecutive pages are typed on plain bond paper similar to the letterhead page in size, color, and quality.

General Style

Naval letters do not contain a salutation or a complimentary closing. Major paragraphs are typed in block style (no indenting), and periods do not follow any part of the heading or the closing. Abbreviations are used in the following items of the heading:

- Subject (Subj)
- Reference (Ref)
- Enclosure (Encl)

When these are referred to in the body of the letter, they will not be abbreviated, but spelled out.

Sender's Symbols

There are three types of identification symbols used on correspondence for reference and record purposes. They are the Standard Subject Identification Code (SSIC), the serial number, and the date. Depending on the practice of your activity, one or more of these symbols may appear on a letter. Explanations for these symbols are as follows:

A STANDARD SUBJECT IDENTIFICATION CODE is used to indicate the subject under which the letter will be filed. The file number is a four- or five-digit numerical code derived from SECNAVINST 5210.11, *Department of the Navy*

Standard Subject Identification Codes (SSIC), and should start one line below the last line of the letterhead.

A **SERIAL NUMBER** is a set of numbers assigned to specific correspondence for identification purposes and is used with the originator's code. The serial numbers are logged and used in consecutive order. The same serial number is never used on two separate documents.

The **DATE** should be typed or stamped on all copies of a letter on the same day it is signed. Do not put the date on correspondence that will be signed at a later date. When material is dated, use a day-month-year order using only the first three letters of the month and the last two digits of the year.

Heading

The **FROM** line identifies, by title, the official in charge of the activity of the Department of the Navy who originates the letter. When a reply is required, this is the official to whom the reply is directed. When an originating official has more than one title (such as commander of a naval base and commandant of a naval district), normally only one of the titles is used in the **From** line of a given letter, depending upon the placement of responsibility for the subject matter involved.

The **TO** line on official correspondence is used to address the chief official of the bureau, office, command, or activity having responsibility for the subject matter. When an addressed official has more than one title, only the single title under which the official has responsibility for the particular subject matter involved is used in the **To** line.

Official correspondence intended for an official in an office and pertaining to that office should be addressed to the official by title and not by name. The title is written in the same manner as that on the **From** line, and sufficient information is given in addition to the title to ensure that the letter is correctly and readily delivered. The title of the person may be followed in the **TO** line by the code of the subordinate office or official having responsibility for the subject matter. This **attention** title or code is enclosed in parentheses, and the word *attention* or its abbreviation is normally not used unless it is necessary to use the name of an individual. No attention designation is needed where other information, such as that in a reference line, may be expected to ease the appropriate routing.

The **VIA** line is used when it is necessary for an organization to endorse (approve, disapprove, or comment on) a naval letter. The letter is transmitted to such addressees before it is received by the ultimate addressee.

The **VIA** line is placed on the line below the "to" line. When there is more than one **VIA** addressee, each is numbered with Arabic numerals enclosed in parentheses. These numerals indicate the sequence through which the correspondence is to be sent. A **VIA** addressee may alter the list of other **VIA** addressees, but should indicate the reason in the text of the endorsement.

A copy of the letter, together with a copy of each enclosure, is provided for each addressee (if practical). (A NAVGRAM or message is not addressed **VIA** another addressee.)

The **SUBJECT** line of an outgoing letter/replying letter should be the same as or similar to that of the incoming letter and should tell the reader what the subject of the letter is about in 10 words or less. The subject line starts two lines below the previous line, and every letter after the colon should be capitalized.

The **REFERENCE** line is for listing all references in the order in which they are mentioned in the text of the communication or, where the sequence of their issuance is significant, in chronological order. References are designated by small letters enclosed in parentheses (for example, (a), (b), (c)). Only those references that contribute to the understanding of the letter should be listed. References include not only written communications, publications, and documents that are available to the addressee but also telephone conversations, meetings, and other oral exchanges. Generally, references should not be used if they are not referred to in the body of the correspondence.

When a letter is cited, the **REFERENCE** line includes the following:

- The SNDL short title of the originator
- The type of correspondence (letter, NAVGRAM, memorandum)
- The Standard Subject Identification Code (SSIC)
- The originator's code by itself or in a serial number as shown in the referenced document
- The date

The **ENCLOSURE** line is numbered with Arabic numerals in parentheses. Enclosures are listed in the order of appearance in the text of the communication, or in other logical order. An enclosure is identified in the same manner as a reference.

When enclosures must be sent under a separate cover, the designation SEP COVER (separate cover) in parentheses is added after the number and the description of the enclosure. A copy of the letter is sent with the material being transmitted under separate cover, or complete identification of the letter should be included on the enclosure, if possible. An enclosure is never listed as a reference in the same letter.

The **TEXT** (or body of the correspondence) is the principal part. The text contains the thoughts the writer or drafter desires to communicate; it is the reason for the existence of all of the other parts of the correspondence. The drafter must word the text so that it expresses unmistakably the thoughts that he/she desires to convey. The arrangement and identification of the paragraphs of naval correspondence are illustrated and discussed in the sample naval letters in figures 6-1 and 6-2.

The **SIGNATURE** line is typed or stamped in block style on the fourth line below the last line of the text, starting at the center of the page. All names are typed in capitals at the end of a letter. The format of the signature should be that which is preferred by the signer. Neither the grade nor the functional title of the signing official is shown on the signature line as a rule.

The **COPY TO** line is placed at the left margin, on the second line below the last line of the signature information. *Copy to* is written in full and followed by a colon. Activities receiving copies are listed preferably by abbreviated titles beginning on the line below the "copy to" notation.

If an enclosure is not sent, the notation **without enclosure** or its abbreviation, **w/o encl** together with the enclosure number, is shown in parentheses, immediately following the designation of the addressee, or, if appropriate immediately following the words **Copy to**. If all of two or more enclosures are omitted, the plural may be added to **enclosure** or **encl.**, and the numbers are not listed. When two or more copies are to be sent to all **copy to** addressees, the number is placed immediately after **Copy to**. When the number sent to each addressee varies, the number of copies is noted by placing the appropriate number in parentheses immediately following the title of the recipient.

Endorsements

An endorsement is used to approve, disapprove, or comment on the content of a letter that is forwarded through one or more addressees before reaching its final destination. When there is adequate space remaining on the page, the first and any consecutive endorsements may be placed on the same page containing the basic letter or prior endorsement.

When an endorsement is typed below the basic letter or another endorsement, a dash line is placed one line below the last line of the communication. The originator's code is placed one line below the dash line.

Except for the heading, the format of the endorsement is much the same as that of an official letter.

MEMORANDUM

Memorandums (MEMOs) are used for informal communications between activities or subordinates, and may be directed to one or more addressees. A memorandum is never used to issue directives.

A memorandum may be prepared on plain bond paper or on the Department of the Navy

1
2
3
4 *DEPARTMENT OF THE NAVY
*Name of Activity
*Address

1
2 SSIC Code/*Serial
*Date

1
2 From: Title of activity head, name of activity, location when needed
To: Title of activity head, name of activity, location when needed (Code)
Via: (1) *Title of activity head, name of activity, location when needed (not numbered if only one)*
(2) *Pattern of (1) repeated for next endorser*

1
2 Subj: NORMAL WORD ORDER, ALL LETTERS CAPITALIZED

1
2 *Ref:* (a) *Earlier communication that bears directly on subject at hand*

1
2 *Encl:* (1) *Material enclosed with letter identified in same way as reference, single enclosure numbered*
(2) *Notation added for material sent separately (sep cover)*

1
2 1. This example shows all the elements that might appear on the original of a one-page standard letter.

2. If you omit the date when you type the letter, start the from block on the fourth line below the code/serial to allow for an oversized date stamp.

3. Other full-page examples in this chapter and later ones show the spacing to follow for correspondence that variously omits via, reference, and enclosure blocks.

1
2
3
4 *NAME OF SIGNER
By direction

1
2 *Copy to:*
Short title of information addressee (see SNDL)
Short title of second information addressee

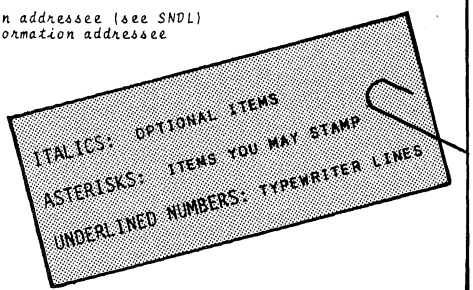


Figure 6-1.—Standard naval letter.

DEPARTMENT OF THE NAVY
NAVAL AIR STATION
CECIL FIELD, FLORIDA 32215

5216
Ser 11/352
3 Jun 83

From: Commanding Officer, Naval Air Station, Cecil Field
To: Commander in Chief, U.S. Atlantic Fleet
Via: (1) Commander, Sea Based ASW Wings, Atlantic
(2) Commander, Naval Air Force, U.S. Atlantic Fleet

Subj: HOW TO PREPARE ENDORSEMENTS

Encl: (1) Orientation Schedule for Newcomers

1. Same-page endorsements may be added to a basic letter, like this one, or to a previous endorsement. This sentence cites enclosure (1).

J. M. Shuttleworth

J. M. SHUTTLEWORTH

- -

Ser 019/870
17 Jun 83

FIRST ENDORSEMENT

From: Commander, Sea Based ASW Wings, Atlantic
To: Commander in Chief, U.S. Atlantic Fleet
Via: Commander, Naval Air Force, U.S. Atlantic Fleet

1. Start an endorsement on the same page as the latest communication if the answer to all three questions is yes:

a. Is the latest communication less than a page?

b. Will all of the endorsement fit on that page?

c. Is the endorsement sure to be signed without revision?

2. A same-page endorsement may omit the SSIC, subject, and basic-letter's identification as long as the entire page will be photo-copied. However, all three elements are required if you make carbon copies. These elements also are required on all new-page endorsements, such as the one on the next page.

W. J. WALLISCH

Copy to:
NAS Cecil Field (Code 11)

Figure 6-2.—Standard Naval Letter, with endorsement.

Memorandum, OPNAV 5216/144 (fig. 6-3). Informal communications within an office may be written on the memorandum form by hand. A memorandum may also be prepared on letterhead stationery or plain bond paper, but the word *MEMORANDUM* should be typed in capital letters at the left margin, below the last line of the address in the letterhead or equivalent vertical spacing or below the security classification if any.

If the subject of an informal memorandum is not significant, there is no need to keep a file copy. Endorsements for informal memorandum that do not require comments may consist of the endorser's initials and date next to the VIA line at the top of the page.

DIRECTIVES

Directives are used by commands to communicate plans and policies to subordinates. Directives prescribe or establish policy, organization, conduct, methods, or procedures; require action or set forth information essential to the effective administration or operation of activities concerned; or contain authority or information that must be issued formally. The directives system provides two types of directives. They are **instructions** and **notices**.

Instructions

Instructions are directives that contain authority or information that is of continuing reference value or requires continuing action. An instruction remains in effect until it is superseded by another instruction or is canceled by the originator or a higher authority.

Notices

Notices are directives of a one time or brief nature and have a self-canceling provision. The notice has the same authority and effect as an instruction. Usually, a notice will remain in effect for less than 6 months but for no longer than 1 year.

DIRECTIVES IDENTIFICATION SYSTEM

The directives identification system includes the type of directives, the issuing authority, and the identification number. The following paragraphs provide descriptive comments for the directive identified as SECNAVINST 5212.1A.

SECNAV (Office of the Secretary of the Navy) is the abbreviation of the issuing authority of the directive.

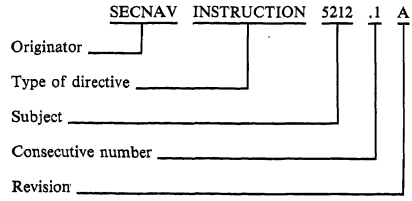
INST identifies the type of directive, in this case an instruction. (For notices, the abbreviation **NOTE** is used.)

If a letter precedes the identification number, this indicates the security classification of the directive. The letter *C* indicates Confidential, and *S* indicates Secret. Top Secret material is excluded from the *Directives Issuance System*, SECNAVINST 5215.1.

The digits 5212 are the identification code, or file number. SECNAVINST 5210.11, *Standard Subject Identification System*, contains a list of the appropriate code numbers to be used with directives. The identification code 5212 indicates that the subject matter of the directive, in accordance with SECNAVINST 5210.11, is Records Disposal System.

The issuing authority assigns a consecutive number, in numerical sequence, to each instruction issued under the same subject identification code, regardless of its security classification. The consecutive numbers that are later canceled are not reused. The consecutive number always follows the identification code, separated by a period. The consecutive number in the sample above is 1. Notices are not assigned consecutive numbers, but are identified by an issuing date.

When an instruction is revised, the same subject identification code and consecutive number contained on the directive being revised remain the same. A capital letter (beginning with "A") is added after the consecutive number to indicate what revision it is: first revision, A; second revision, B; and so forth. The following example is given to show an identifying symbol assigned to a directive:



Purpose

The main purpose for the directives identification system is that it allows each naval

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

DATE: 16 Mar

FROM: OP-09BR (77256)

TO: OP-09B

SUBJ: PRINTED MEMORANDUM FORM

Ref: (a) SECNAVINST 5216.5C

Encl: (1) Personnel Roster

1. This printed form is the most informal memorandum. Use it among individuals and offices of the same activity.

2. The memorandum form comes in three sizes.

   a. OPNAV 5216/144A (8-1/2 by 11 inches):

   b. OPNAV 5216/144B (8-1/2 by 5-1/2 inches):

   c. OPNAV 5216/144C (5-1/2 by 8-1/2 inches):

3. Except for the date, no sender's symbols are necessary.

4. Use names, titles, or codes in the From block and To block.

5. Allow a 1-inch left margin.

6. Type reference and enclosure headings under the printed headings. Note the headings for reference (a) and enclosure (1).

7. The writer signs his or her name without an authority line.

8. Very informal memorandums may be penned.

9. No file copy is necessary when the matter is insignificant or short lived.

M. D. Hartburg

Figure 6-3.—Printed memorandum form.

activity that receives directives to do the following:

- Group directives by subject and to combine related subjects

- Distinguish between directives of a continuing type nature and those of brief duration

- Obtain complete sets of instructions when an activity is commissioned or activated

- Determine by the current status and completeness of directives using check lists

- File directives and describe them as references by one easy method

- Use the same numbering system for correspondence files and directives

Since this system serves many useful purposes, you will find it important to become well acquainted with it.

Directive Criteria

In general, a document, regardless of its physical characteristics, is issued in the directives issuance system when it does one or more of the following:

- Regulates or is essential to effective administration

- Establishes policy

- Delegates authority or assigns responsibility

- Establishes an organizational structure

- Assigns a mission, function, or task

- Initiates or governs a course of action or conduct

- Establishes a procedure, technique, standard, guide, or method of performing a duty, function, or operation

- Establishes a reporting requirement

- Changes, supersedes, or cancels another directive

Material falling outside the scope of the above criteria may be issued in the directives issuance system to obtain quick and controlled dissemination. Normally issued as notices, these may include

1. requests for comments, approval, or information;

2. directions for routinely carrying out established operations, such as matters pertaining to individual personnel actions or special shipments of material; and

3. informative announcements, such as education or promotion opportunities, recreational activities, work improvement plans, suggestions for morale building, or changes in office locations or telephone extensions.

The types of documents exempted from the directives issuance system include

- Navy Regulations,

- Top Secret documents,

- Registered publications,

- Operations plans and orders, and

- technical and regulatory manuals and publications, and changes to them.

Directive Distribution

The drafter of a directive has the primary responsibility to determine the distribution requirement. Since it is essential that policy and procedural directives receive proper distribution, the drafter must check the appropriate distribution list to ensure proper dissemination.

The distribution list is a list of the "action" and "information" addressees of a directive. These addressees are selected on the basis of **need to act** or **need to know**. Each activity preparing directives is required to prepare a distribution list.

The distribution list normally consists of specific lists for internal distribution, distribution to higher authority, and distribution to activities of the same type. The distribution list may also indicate the number of copies that should be forwarded to an activity, department, or division.

A *naval message* is an official communication transmitted by rapid means, such as radio or telegraph. A message is used for urgent communication, where speed is of primary importance. Messages should not be used when the necessary information can reach its destination in time for proper action by letter or by a NAVGRAM.

As a writer of messages, you will be required to prepare messages in the proper format and follow basic procedures. As a reader of messages, you will be required to understand the format and contents of a message.

Types of Messages

There are four types of narrative messages: **single-address, multiple-address, general,** and **book**. A single-address message has only one addressee, which may be either for action or information. A multiple-address message has two or more addressees and is of such a nature that a drafter considers that each addressee must know of all other recipients. General messages are designed to meet recurring requirements for the dissemination of information to a wide, predetermined, standard distribution. General messages are titled (ALCOM, ALMILACT, NAVOP, etc.), and because the title indicates the distribution, it serves as the addressee designator in the address line of the message heading. A book message is one that is destined for two or more addressees but is of such a nature that the drafter concludes that no addressee need be informed of other addressees.

As a Mineman, you will normally come in contact only with single-address, multiple-address, and general types of messages. When you draft messages, you will write either a single- or multiple-addressee type of message.

Responsibilities

Your specific responsibilities concerning messages will depend upon your involvement with each message. You may be the originator, releaser, drafter, or receiver (addressee) of the message. Each is described in the following paragraphs.

ORIGINATOR.—The originator of a message is the authority (command or activity) in whose name the message is sent. The originator

RELEASER.—The message releaser is a properly designated individual authorized to release a message for transmission in the name of the originator. The releaser is responsible for validating the contents of the message and affirming that the message is in compliance with message-drafting instructions. It is the releaser's signature that authorizes the transmission of the message.

DRAFTER.—The drafter is the person who composes the message. Among all personnel involved with message management, the drafter is the key to an effective program. The drafter must have the most detailed knowledge and understanding of basic message procedures. The drafter is responsible for all of the following:

1. Proper addressing
2. Proper application of security classification, special handling, and declassification markings required by OPNAVINST 5510.1 *Department of the Navy Information and Personnel Security Program Regulation*
3. Appropriate precedence selection
4. Correctly formatted and error-free message
5. Clear and concise composition

ADDRESSEE.—The addressee's responsibilities depend upon whether the addressee is an action addressee or information addressee. For an action addressee, the message may require a response or an immediate action. For an information addressee, the message will not normally require any action. In either case, the message may have to be readdressed to another activity, which is discussed later.

Message Precedence

The precedence enables the drafter to indicate the writer-to-reader time and to give the telecommunications center the relative order of processing and delivery. It also gives the addressees the relative order in which they should determine the importance of the message. The precedence assigned to a message is determined by the subject matter of the text and the desired writer-to-reader delivery time. Although the assignment of the precedence is the drafter's responsibility, the releaser of the message may change the precedence.

There are four precedence categories: Routine (R), Priority (P), Immediate (O), and Flash (Z). For the precedence system to work properly, precedence assignment must be based on urgency rather than importance of the subject. Complete information and examples of each type of precedence are contained in NTP 3, *Telecommunications Users Manual*. The four precedence categories are as follows:

1. Routine—The precedence assigned to all types of traffic that justify electrical transmission but are not of sufficient urgency to require a higher precedence. The Routine precedence is identified by the prosign R.
2. Priority—This precedence is reserved for messages that furnish essential information for the conduct of operations in progress. This is the highest precedence normally authorized for administrative messages. Priority precedence is identified by the prosign P.
3. Immediate—Immediate precedence is reserved for messages relating to situations that gravely affect the national forces or populace and that require immediate delivery to addressees. Immediate precedence is identified by the prosign O.
4. Flash—Flash precedence is reserved for initial enemy contact reports or operational combat messages of extreme urgency. Message brevity is mandatory in Flash messages. Flash precedence is identified by the prosign Z.

Messages that have both action and information addressees may be assigned a single precedence or a dual precedence. A dual precedence exists when a higher precedence is assigned to action addressees than to information addressees. It is important that the assignment of dual precedence be considered on all messages with information addressees when other-than-Routine precedence is assigned to the action addressee(s).

The precedence assigned to a message has no direct effect on the time that a reply must be sent or on the precedence assigned to that reply. Each activity must establish its own requirements concerning the acknowledgment of messages. The following factors should be considered when submitting a reply to a message:

Regardless of the reaction times established locally, Flash and Emergency Command Precedence messages that require a reply must always be handled as quickly as possible. In some cases, you may be required to forward a reply to the originator in less than 30 minutes.

Message Date-Time Group

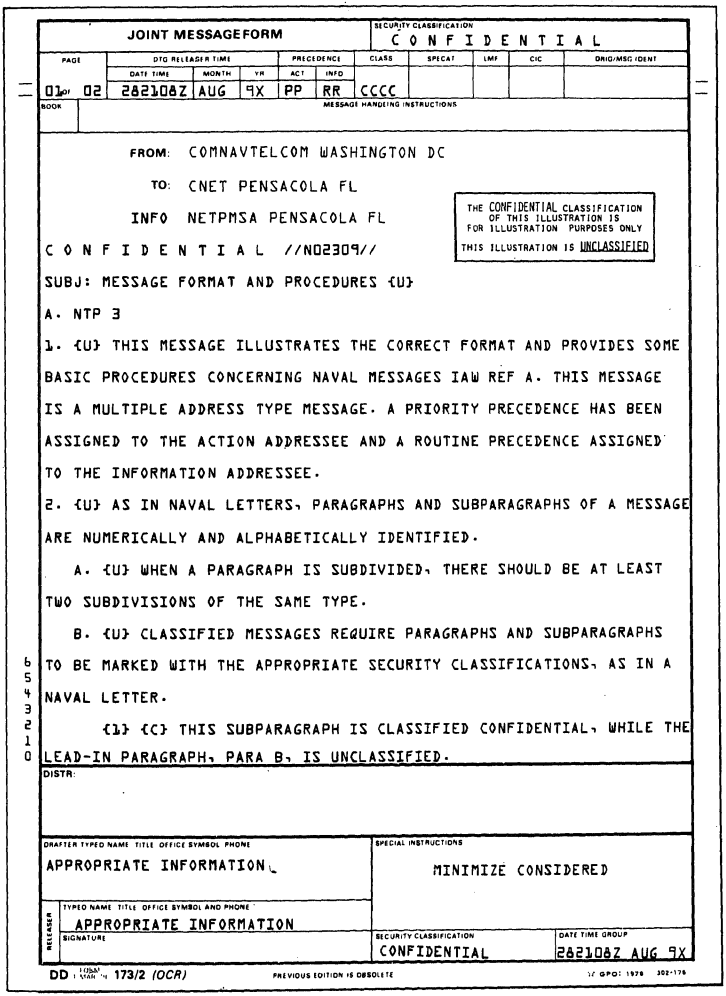
The date-time group (DTG) is assigned to messages for identification and file purposes only. The DTG consists of six digits followed by a time-zone suffix (211630Z). In our example, the first pair of digits (21) denotes the day of the month, the second pair (16) indicates the hour, and the third pair (30) the minutes. All DTGs are expressed in Greenwich Mean Time (Z) unless otherwise directed by higher authority. In addition, the abbreviated month and year of origin is appended to the DTG. Therefore, the DTG 211630Z OCT 9X would be identified as a message being officially released from a communication facility for transmission at 1630 hours, Greenwich Mean Time, on the 21st of October 199X.

Date-time groups are normally assigned by the Telecommunications Center (TCC). Commands served by a consolidated TCC may assign their own DTG to messages if it is deemed more expedient for operational or administrative purposes and approved by the TCC. In either case of DTG assignment, duplicate date-time groups should not be used by the same originator during the same 24-hour period. The hours 2400 and 0000 should not be used, because of possible confusion. The hours 2359 and 0001 are the authorized times for use.

Although not considered as part of the date-time group, the originator's name must be included in the identification of a specific message. For example: MOMAG UNIT NINE RP 032115Z MAY 9X indicates a specific message originated by MOMAG UNIT NINE. However, a message identified only by the DTG 032115Z MAY 9X is not properly identified, since any command in the Navy could have released a message with the same DTG.

Message Format

Naval messages are prepared on DD 173/2,



JOINT MESSAGEFORM

SECURITY CLASSIFICATION: C O N F I D E N T I A L

PAGE	DTG RELEASER TIME			PRECEDENCE		CLASS	SPECAT	LMF	CIC	ORIG/MSG IDENT
	DATE TIME	MONTH	YR	ACT	INFO					
01 OF 02	2821087	AUG	9X	PP	RR	CCCC				

BOOK — MESSAGE HANDLING INSTRUCTIONS

FROM: COMNAVTELCOM WASHINGTON DC

TO: CNET PENSACOLA FL

INFO NETPMSA PENSACOLA FL

THE CONFIDENTIAL CLASSIFICATION OF THIS ILLUSTRATION IS FOR ILLUSTRATION PURPOSES ONLY

THIS ILLUSTRATION IS UNCLASSIFIED

C O N F I D E N T I A L //N02309//

SUBJ: MESSAGE FORMAT AND PROCEDURES (U)

A. NTP 3

1. (U) THIS MESSAGE ILLUSTRATES THE CORRECT FORMAT AND PROVIDES SOME BASIC PROCEDURES CONCERNING NAVAL MESSAGES IAW REF A. THIS MESSAGE IS A MULTIPLE ADDRESS TYPE MESSAGE. A PRIORITY PRECEDENCE HAS BEEN ASSIGNED TO THE ACTION ADDRESSEE AND A ROUTINE PRECEDENCE ASSIGNED TO THE INFORMATION ADDRESSEE.

2. (U) AS IN NAVAL LETTERS, PARAGRAPHS AND SUBPARAGRAPHS OF A MESSAGE ARE NUMERICALLY AND ALPHABETICALLY IDENTIFIED.

A. (U) WHEN A PARAGRAPH IS SUBDIVIDED, THERE SHOULD BE AT LEAST TWO SUBDIVISIONS OF THE SAME TYPE.

B. (U) CLASSIFIED MESSAGES REQUIRE PARAGRAPHS AND SUBPARAGRAPHS TO BE MARKED WITH THE APPROPRIATE SECURITY CLASSIFICATIONS, AS IN A NAVAL LETTER.

(1) (C) THIS SUBPARAGRAPH IS CLASSIFIED CONFIDENTIAL, WHILE THE LEAD-IN PARAGRAPH, PARA B, IS UNCLASSIFIED.

6 5 4 3 2 1 0

DISTR:

DRAFTER TYPED NAME TITLE OFFICE SYMBOL PHONE: APPROPRIATE INFORMATION

SPECIAL INSTRUCTIONS: MINIMIZE CONSIDERED

RELEASER — TYPED NAME TITLE OFFICE SYMBOL AND PHONE: APPROPRIATE INFORMATION

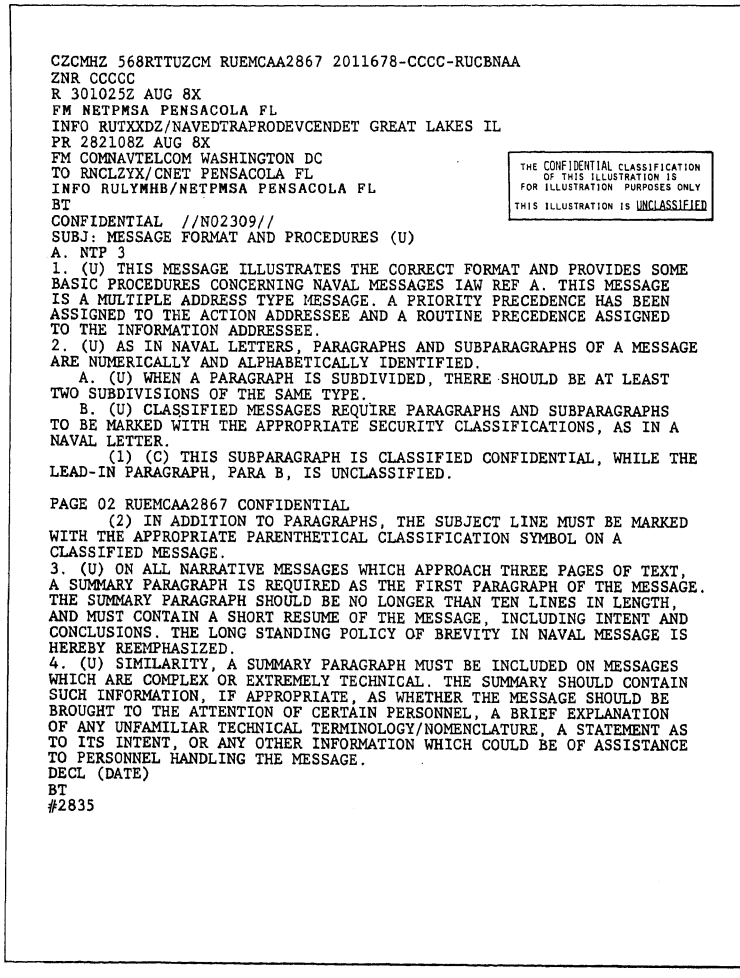
SIGNATURE

SECURITY CLASSIFICATION: CONFIDENTIAL

DATE TIME GROUP: 2821087 AUG 9X

DD FORM 173/2 (OCR) PREVIOUS EDITION IS OBSOLETE ☆ GPO: 1978 302-176

Figure 6-4.—Naval message.



CZCMHZ 568RTTUZCM RUEMCAA2867 2011678-CCCC-RUCBNAA
ZNR CCCCC
R 301025Z AUG 8X
FM NETPMSA PENSACOLA FL
INFO RUTXXDZ/NAVEDTRAPRODEVCENDET GREAT LAKES IL
PR 282108Z AUG 8X
FM COMNAVTELCOM WASHINGTON DC
TO RNCLZYX/CNET PENSACOLA FL
INFO RULYMHB/NETPMSA PENSACOLA FL
BT
CONFIDENTIAL //N02309//
SUBJ: MESSAGE FORMAT AND PROCEDURES (U)
A. NTP 3
1. (U) THIS MESSAGE ILLUSTRATES THE CORRECT FORMAT AND PROVIDES SOME BASIC PROCEDURES CONCERNING NAVAL MESSAGES IAW REF A. THIS MESSAGE IS A MULTIPLE ADDRESS TYPE MESSAGE. A PRIORITY PRECEDENCE HAS BEEN ASSIGNED TO THE ACTION ADDRESSEE AND A ROUTINE PRECEDENCE ASSIGNED TO THE INFORMATION ADDRESSEE.
2. (U) AS IN NAVAL LETTERS, PARAGRAPHS AND SUBPARAGRAPHS OF A MESSAGE ARE NUMERICALLY AND ALPHABETICALLY IDENTIFIED.
A. (U) WHEN A PARAGRAPH IS SUBDIVIDED, THERE SHOULD BE AT LEAST TWO SUBDIVISIONS OF THE SAME TYPE.
B. (U) CLASSIFIED MESSAGES REQUIRE PARAGRAPHS AND SUBPARAGRAPHS TO BE MARKED WITH THE APPROPRIATE SECURITY CLASSIFICATIONS, AS IN A NAVAL LETTER.
(1) (C) THIS SUBPARAGRAPH IS CLASSIFIED CONFIDENTIAL, WHILE THE LEAD-IN PARAGRAPH, PARA B, IS UNCLASSIFIED.

PAGE 02 RUEMCAA2867 CONFIDENTIAL
(2) IN ADDITION TO PARAGRAPHS, THE SUBJECT LINE MUST BE MARKED WITH THE APPROPRIATE PARENTHETICAL CLASSIFICATION SYMBOL ON A CLASSIFIED MESSAGE.
3. (U) ON ALL NARRATIVE MESSAGES WHICH APPROACH THREE PAGES OF TEXT, A SUMMARY PARAGRAPH IS REQUIRED AS THE FIRST PARAGRAPH OF THE MESSAGE. THE SUMMARY PARAGRAPH SHOULD BE NO LONGER THAN TEN LINES IN LENGTH, AND MUST CONTAIN A SHORT RESUME OF THE MESSAGE, INCLUDING INTENT AND CONCLUSIONS. THE LONG STANDING POLICY OF BREVITY IN NAVAL MESSAGE IS HEREBY REEMPHASIZED.
4. (U) SIMILARITY, A SUMMARY PARAGRAPH MUST BE INCLUDED ON MESSAGES WHICH ARE COMPLEX OR EXTREMELY TECHNICAL. THE SUMMARY SHOULD CONTAIN SUCH INFORMATION, IF APPROPRIATE, AS WHETHER THE MESSAGE SHOULD BE BROUGHT TO THE ATTENTION OF CERTAIN PERSONNEL, A BRIEF EXPLANATION OF ANY UNFAMILIAR TECHNICAL TERMINOLOGY/NOMENCLATURE, A STATEMENT AS TO ITS INTENT, OR ANY OTHER INFORMATION WHICH COULD BE OF ASSISTANCE TO PERSONNEL HANDLING THE MESSAGE.
DECL (DATE)
BT
#2835

THE CONFIDENTIAL CLASSIFICATION OF THIS ILLUSTRATION IS FOR ILLUSTRATION PURPOSES ONLY
THIS ILLUSTRATION IS UNCLASSIFIED

Figure 6-5.—Incoming re-addressal message.

NTP 3, *Telecommunications Users Manual,* and NTP 3 SUPP-1, *U.S. Plain Language Address Directory.*

Message Re-addressals

It is frequently necessary to transmit a message to an activity that was not an addressee of the message as it was originally drafted. This process is called **message re-addressal.** The originator or action addressee of a message may re-address that message for action or information to another activity. An information addressee may re-address a message for information purposes only.

Because the relationship between telecommunications users and telecommunication centers varies widely from one location to another, it is impossible to standardize one set of re-addressal procedures. Normally at shore establishments where a single telecommunication center serves several commands, the re-addressal activity drafts a message to the telecommunication center requesting that a specific message be re-addressed.

Whenever a re-addressal message is prepared, the message is handled and accounted for as a complete, unique message. Re-addressal messages carry a unique date-time group and supplementary heading, and must be released by a person authorized to release messages.

Figure 6-5 illustrates an incoming re-addressal message. The first or top date-time group is the re-addressal date-time group. The letter *R* preceding this date-time group is the precedence prosign for Routine. The second date-time group is the original message date-time group and should always be used to identify, reference, or file the message. The letters *PR* preceding this date-time group are the precedences assigned to the original message; the letter *P* indicates Priority for the action addressee, and the letter *R* indicates Routine for the information addressee.

Minimize Condition

Minimize is a condition imposed by proper authority to reduce and control electrical message and telephone traffic. The purpose of minimize is to clear the telecommunications network of message and/or voice traffic the urgency of which does not justify electrical transmission during an actual or simulated crisis. During periods of minimize, message drafters and releasers must review all messages to ensure that electrical transmission is essential and that the lowest precedence consistent with speed of service objectives is used. Messages prepared for electrical transmission under minimize conditions must have the phrase "MINIMIZE CONSIDERED" stamped in the special instructions block of the message form—not in the body of the message text.

NAVY MAILED MESSAGE PROGRAM (NAVGRAM)

The Navy Mailed Message Program was established to reduce the number of electrically transmitted messages in the navy's communication system.

It is the responsibility of the releaser to determine if the message qualifies as a NAVGRAM or if it should be sent by electrical transmission. Once this has been determined, the releaser will write the word NAVGRAM below the signature block on the message form (DD 173) after it is signed for release (fig. 6-6). The NAVGRAM is then assigned a *letter* serial number and date in the date-time-group block of the message form and mailed in accordance with the local administrative procedure.

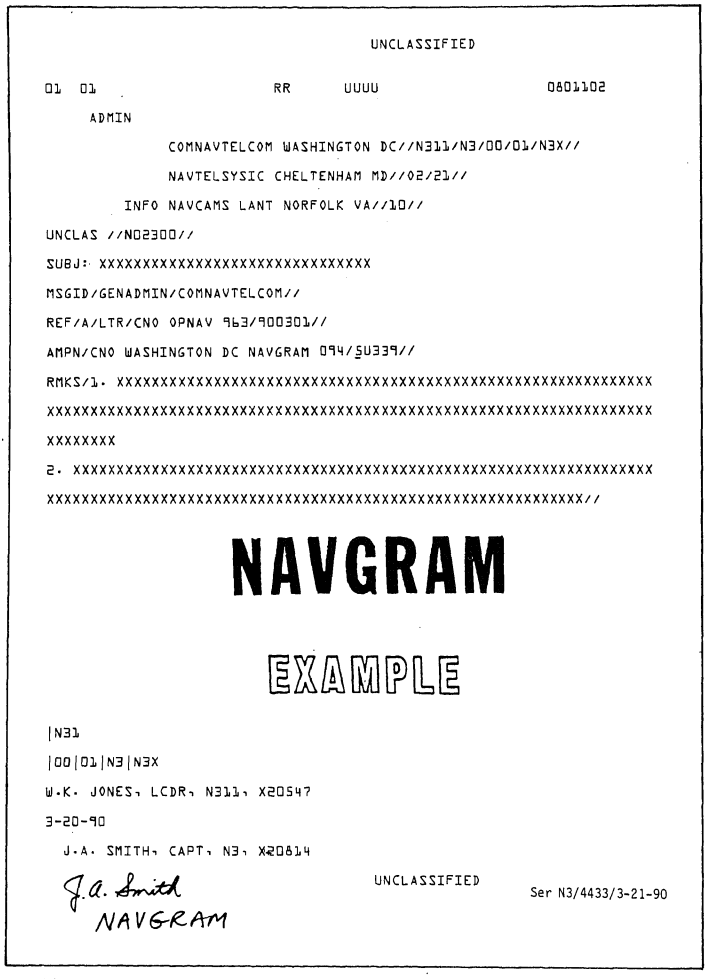
NOTE

NAVGRAMS will be processed through Administrative channels and not Communications channels.

NAVGRAMS have superseded the Naval Speedletter and the following procedures apply to NAVGRAMS:

- They are given priority over routine correspondence.
- They are authorized to be addressed to all activities in the Department of Defense (DOD) but not to non-DOD activities.
- They may contain up to 15 addressees.
- They may be classified Secret and below.
- They are not affected by MINIMIZE.
- They may be used as references in the reference line of other correspondence.

Your command should have a 4 inch by 1 inch "NAVGRAM" stamp that is used with light red


UNCLASSIFIED
01 01 RR UUUU 0801102
ADMIN
COMNAVTELCOM WASHINGTON DC//N311/N3/00/01/N3X//
NAVTELSYSIC CHELTENHAM MD//02/21//
INFO NAVCAMS LANT NORFOLK VA//10//
UNCLAS //N02300//
SUBJ: XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
MSGID/GENADMIN/COMNAVTELCOM//
REF/A/LTR/CNO OPNAV 963/900301//
AMPN/CNO WASHINGTON DC NAVGRAM 094/SU339//
RMKS/1. XXXXXXXXXXXXXXXXXXXX

ink for the purpose of identifying NAVGRAMs. A message form that will be sent as a NAVGRAM should be stamped in the center of the page for easy identification.

CLASSIFIED INFORMATION

Proper security classification of correspondence is a serious problem in the Navy, largely because of over classification. The writer should make certain that classification, if assigned, is justified by a genuine need. The classification should be indicated on the rough draft, and the draft handled as required by that classification.

There are no simple rules for security. One has to digest the various policy directives and then apply common sense. Correspondence does not have to be classified according to the classification of references unless it reveals a significant part of their content.

Each piece of correspondence should be assigned the lowest classification consistent with the proper protection of the defense information contained in it. Correspondence and documents should be classified according to their content and not necessarily according to their relationship to other documents. This procedure is particularly important when documents are part of a series. Various paragraphs or sections of a single document may contain different classifications. The document must bear the highest overall classification contained therein. The following classifications are used to denote the degree of protection required:

Top Secret—Information or material that with unauthorized disclosure could result in *Exceptionally Grave Damage* to the nation.

Secret—Information or material that with unauthorized disclosure could result in *Serious Damage* to the nation.

Confidential—Information or material that with unauthorized disclosure could be *Prejudicial* to the defense interests of the nation.

Regulations and guidance for classifying and safeguarding classified information are contained in OPNAVINST 5510.1, *Department of the Navy Information and Personnel Security Program Regulation*. Guidelines concerning mine warfare information and material are contained in OPNAVINST C5513.7, *Department of the Navy Security Classification Guidance for Mine Warfare Programs*.

Correspondence Filing System

All navy correspondence is identified by a Standardized Subject Identification Code. This is a numbering system to provide for easier classification and filing of letters, messages, and directives. For this reason, all correspondence is classified under one of 13 major series groups. These major series groups are further subdivided by changing the last three numbers of the series group. The 13 major series groups are as follows:

1000 Series—Military Personnel

2000 Series—Communications

3000 Series—Operations and Readiness

4000 Series—Logistics

5000 Series—General Administration and Management

6000 Series—Medicine and Dentistry

7000 Series—Financial Management

8000 Series—Ordnance Material

9000 Series—Ships design and Ships Material

10000 Series—General Material

11000 Series—Facilities and Activities Ashore

12000 Series—Civilian Personnel

13000 Series—Aeronautical Material

The 13 major subject groups are further subdivided into primary, secondary, and tertiary groups. For example:

8000—Ordnance Material (Major Group)

8500—Underwater Ordnance General (Primary Group)

8510—Torpedoes (Secondary Breakdown)

8550—Mines (Secondary Breakdown)

8551—Aircraft Laid (Tertiary Breakdown)

8553—Submarine Laid (Tertiary Breakdown)

Some subject groups may not be subdivided below the primary group level, while other groups may be subdivided only to the secondary level. The extent of the breakdown depends upon the scope and complexity of the major subject.

PUBLICATION MAINTENANCE

As a Mineman, you have used many different publications that apply to your job. Now, as a supervisor, it will be your job to make sure that these publications are properly maintained and updated and that a full allowance is onboard in accordance with the Mine Bill of Material (MBOM).

A publication may contain anything from the description of the weapons system and test procedures to a parts breakdown and information on ordering needed parts. Without proper maintenance of these publications, erroneous or outdated information could be used.

PUBLICATION CHANGES

Publications are updated by the issuance of changes or revisions. These are modifications to the publication to make sure that is technically correct, accurate, and adequate for its intended used. In this section we discuss **advance change notices, permanent changes,** and **revisions.**

Advance Change Notice

An advance change notice (ACN) is issued when a deficiency or a problem is found in a publication and there is not enough time to issue a permanent change or revision. An ACN is prepared by the activity that has the responsibility for the publication. It is sent by either a naval message or letter, depending on the urgency and amount of information involved. The ACN will direct you to a specific chapter, section, part, page, paragraph, sentence, figure, or table and provide the exact information that must be added, substituted, or deleted.

When you receive the ACN, make sure that you verify the title and number of the publication against the one on the ACN. The ACN can be made by pen and ink, cut-and-tape insertions, or by direct page changes. After you have completed the change, record the entry in the front of the publication on the Record of Changes page. The ACN will be incorporated in the next permanent change or revision of the publication.

Permanent Change

Permanent changes are prepared by the activity having cognizance of the publication. They are used to correct reported deficiencies, incorporate ACNs, add new procedures, and to change existing procedures. A permanent change is issued as a package that contains one or more complete page replacements or additions, the instructions for making the change, a new title page, and a list of effective pages.

When you receive a permanent change, make sure that it is complete. Follow the instructions on the change sheet and remove and/or replace the affected pages. After you have made the change to the publication, make sure that you record the change on the Record of Change page and then destroy all the removed pages by following the local disposal instructions.

Revisions

A revision supersedes an existing edition of a publication. A revision is usually published when an existing publication has several permanent changes issued to it and an additional change would reduce the usability of the publication. The revision is issued as a complete publication or volume of a publication and supersedes all previous issues, ACNs, and changes.

When you receive a revision, the superseded publication may then be destroyed according to local disposal procedures.

TECHNICAL MANUAL DEFICIENCY REPORT

The Technical Manual Deficiency Report (TMDR) is used to report problems in the various publications that you will be using. The three areas that you will be reporting using a TMDR are **accuracy, adequacy,** and **usability.** The following paragraphs give a brief description of these areas.

- Accuracy involves errors in measurements or values, procedures, theory or description, and components or component identification.

- Adequacy involves omission of specific configurations, missing or incomplete information, or lack of detail.

- Usability involves poorly reproduced text or illustrations, incorrect references, or a confusing presentation of material.

When a discrepancy in a publication is found, never assume that it has already been reported by someone else. It is up to you to help keep your publications accurate and usable.

WORK ORDER SYSTEM

The work order system was established so that all MOMAG activities would be uniform in the coordination and management of their work load scheduling. The work order system will help the supply department maintain an accurate inventory control of mine material. It is your responsibility to follow the procedures in COMOMAGINST 4850.1, *Standard Procedures for Initiating and Processing Work Orders*, to make sure that the system will work as it was designed.

GENERAL GUIDELINES

Work orders will be assigned to all tasks performed at an activity. These tasks include both perpetual workload and unscheduled workload requirements. Each task that is performed will be assigned a work order number and will be tracked by that number until the job is completed. At the completion of the task, all paper work that applies to that work order number will be collected and filed. Work orders will consist of a six digit alphanumeric identifier and will be constructed as follows:

1. The first digit indicates the calendar year quarter (1-4).
2. The second and third digits indicate the calendar year in which the work order number was assigned.
3. The fourth digit indicates the function code that identifies the general categories of the task.
   a. A—Long Cycle maintenance.
   b. B—Short Cycle maintenance.
   c. C—Receipt inspections.
   d. D—Exercise and Training mine related items.
   e. E—Upgrade training.
   f. F—Mine Engineering Field Changes.
   g. G—Test equipment maintenance and calibration.
   h. H—Weapon reconfiguration.
   i. I—Other.
4. The fifth and sixth digits indicate the task

For example, the work order number 395B01 is interpreted as the third quarter of the calendar year 1995. The task would be Short-Cycle maintenance, and it would the first such task of that year.

WORKLOAD PLANNING

The planning of the quarterly workload is accomplished through a quarterly workload conference before the start of the next quarter workload.

All jobs that are performed on a recurring basis and are common to all quarters (supply inventories, test set maintenance) should be assigned the same function and task numbers consistently.

The responsibility for maintaining the work order system is usually assigned to the executive officer (XO) or the mine production officer (MPO). The XO/MPO is also responsible for maintaining the files, documents, and initiating additional or unscheduled work orders. Acting in this capacity, the XO/MPO should head the conference.

During the workload conference, a workload summary document is prepared, and the following minimum information is assigned to all tasks:

- Work order number
- The item(s) to be worked
- Scheduled start date
- Scheduled completion date
- The primary work center responsible for job completion

All supervisory personnel should attend the conference to supply information to the XO/MPO as may be required. Once the planning is completed, the workload document is then sent to the officer in charge/commanding officer for his or her approval and signature.

AUTOMATIC DATA PROCESSING (ADP)

The use of small computers for office information systems has grown at a tremendous

have consumed many hours of work each time a document or page needed to be retyped.

Using word processing equipment, you can create letters, memos, charts, forms, and other documents that once had to be done by typewriter. Once the information has been created, you can save it on a disk for future use and not have to recreate it at a later date should you need it. Should any information need to be changed, you can make corrections, rearrange paragraphs, or change the document in any manner, depending on the job you are doing.

Never has information been reduced to the point where whole instructions, letters, and large quantities of classified information could be placed in so small an area. The possibility that information could be lost or stolen because of improper safeguards and misuse is an ever present danger. This section will be used to discuss the proper usage, care and maintenance, and protection and security of ADP equipment.

USAGE GUIDELINES

The first and foremost thing to remember is that word processing systems are to be used for official business only. They are not for your own personal use or to play games on during your breaks. It is your responsibility to make sure that there is no unauthorized use of the equipment.

The systems you will be working with are called microcomputers. These systems can be programmed, but this is not a necessity. Primarily, you will be using packaged or off-the-shelf programs designed for specific applications. You will be using three basic programs: word processing, data management, and spread sheets. Each of these programs will be discussed in the following paragraphs.

Word Processing

You can use word processing software for any function that involves text: letters, memos, forms, and so on. You can also edit, store, retrieve, and print the text. Using these functions, you can delete lines, sentences, or paragraphs. You can move paragraphs from one part of the text to another or to a completely different document. Word processing is particularly useful for text documents that are repetitive or that require a lot of revisions. It saves a lot of retyping of documents.

Data Management

Data management allows you to enter and retrieve data in a variety of ways. You enter the data into the computer and it is stored on a disk. Once the file is stored on the disk, you can retrieve the file by searching the records and print specific fields from the file. For example, you could print a command roster with name, rank, and SSN, or you could print out the names in alphabetical order. You can also generate reports by specifying what records you want to use, what data you want from those records, and whether or not you want data from more than one record to be combined with other records. This program is extremely useful in the administration and supply areas.

Spread Sheets

Spread sheets are tables of rows and columns of numbers that allow you to specify calculations you need to perform. You enter the basic information into the appropriate row or column, and the program will do all the calculations.

CARE AND MAINTENANCE

Your ADP equipment will normally be covered by a maintenance contract to make sure that any system that fails will be corrected by authorized maintenance personnel. Do not, under any circumstances, try to repair the system yourself.

The equipment you use is well designed and does not require a lot of maintenance. At times you should clean, dust and wipe fingerprints off the outside of the monitor screen and the cabinets. When you clean the equipment, use the following steps:

- Make sure the power is turned off before cleaning.
- Use a cloth that is lightly dampened with water or a specified cleaning solution.
- Do not use spray liquids or soaking-wet cloths.
- Make sure all the equipment is dry before applying power to the system.
- Do not attempt to clean the storage disks.
- Use only the authorized cleaning kit to clean the disk drives.

The most common problem you will experience with the system is a build-up of dust over a period of time. To keep this from happening, keep the keyboard, computer, and the monitor covered when they are not in use.

PROTECTION

Two things your ADP system requires protection from are people and the environment. People pose threats to your system through unauthorized use by untrained personnel or by smoking and/or drinking around the computer. Environmental threats come from dust, dirt, power surges, power failures, heat, humidity, and so on. Safeguards are needed to keep this from happening. Proper training of personnel who will use the equipment is mandatory.

PROTECTION OF HARDWARE AND SOFTWARE

As a computer operator, you will be responsible for the protection of software and hardware from misuse and improper handling. Without proper protective measures, many hours of work and research can be lost in an instant. The following paragraphs will discuss some of the steps necessary to make sure that your hardware and software are properly protected.

Hardware Protection

The term *hardware* used in this section refers to the components that make up your system. They include **display monitors, keyboards, system units,** and **printers.** Proper precautions for your ADP/WPS equipment is essential for the protection against catastrophe or mishaps. Using the following steps will help to stop some problems before they become mishaps:

- Always operate the equipment in the temperature range the manufacturer specifies.

- Use a voltage regulator or spike protector in areas where there are frequent power fluctuations.

- Do not place equipment under overhead plumbing or sprinkler systems.

- Always cover equipment not in use with plastic covers to protect against dust accumulation and water damage.

- Always put equipment on a secure, stable surface—never on a flimsy table.

- Never eat, smoke, or drink around the equipment.

Software Protection

The term *software* used in this section refers to the floppy disks on which you store your information. The disk is capable of storing large amounts of information, but can be destroyed or distorted through mishandling or misuse. Use the following steps to reduce the chances of losing information:

- Make sure all disks are properly labeled as to their contents.

- Never write on a label once it is placed on a disk.

- Never store disks in direct sunlight or in high-temperature areas.

- Never place disks near a magnetic source, such as a radio, recording devices, or paper-clip holders.

- Do not allow eating, drinking, or smoking around disk-storage areas.

- Never touch the exposed surface of a disk.

- Never fold, bend, staple, paper clip, or band disks together.

- Always make a back-up copy of a disk that contains information of continuing importance.

Eventually, all disks will wear out. With proper care and handling, your disks will last many hours, and any information will be accessible when needed.

SECURITY OF HARDWARE AND SOFTWARE

Security has been and always will be a major concern in the Navy. Security is everyone's responsibility. You will play an important part in your command's security program by protecting and safeguarding your equipment and its software.

Hardware Security

Your work space will normally provide sufficient physical security to protect against unauthorized access and theft of material. Where possible, access to the spaces where the equipment is stored and operated is restricted to authorized personnel only. If at anytime unauthorized personnel require access to the area, make sure that proper safeguards are used to protect your equipment.

After the completion of a normal work-day or when your activity is not manned, make sure that all equipment is stored in a secure area to prevent access by unauthorized personnel.

Software Security

The primary storage location for information is the floppy disk. The disks that you will normally use are not much more than 5 inches in diameter. Their small size makes them easily hidden. It is also easy for anyone to make copies of the disk. All software must be given proper safeguards to prevent theft, loss, or destruction. The following is a partial list of security requirements:

- All disks should have an external label showing the security classification of the material on that disk. Refer to figure 6-7.

- To limit access, store all disks in a classified container when they are not in use.

- Keep the disks in their protective envelopes and make sure they are stored vertically in their storage boxes.

Remember, once you lose the information on a disk, there is no way to retrieve it. It has to be retyped. Automated Data Processing/Word Processing System equipment is an invaluable asset in time savings. It is up to you to make sure it is properly used and protected.

NOTE

Refer to COMOMAGINST 5230.1, *Implementation and Utilization of Word Processing Systems*, for the qualifications required for the systems operator and security requirements.

SUMMARY

This chapter has covered several topics with which you, as the supervisor, will be concerned. You should now have a basic understanding of naval letters, directives, messages, and how to handle classified material. You should also be able to discuss publication allowances, changes, and the technical manual deficiency reports (TMDR). You should be able to describe and discuss the MOMAG work order system and how the use of automated data processing applies to a MOMAG activity.

If you are ever assigned as an administrative supervisor, you will be performing a variety of tasks. You will be relied upon to perform these

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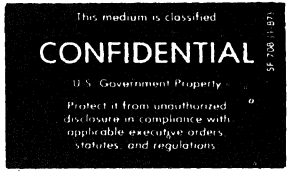
SF 707 (RED)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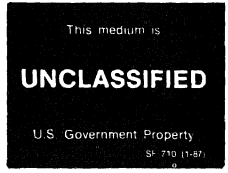
STANDARD FORM
SF 708 (BLUE)



STANDARD FORM
SF 710 (GREEN)

tasks, and others, efficiently and smoothly. This chapter has given you the basics; it is now up to you to continue learning about administrative functions.

REFERENCES

Information and Personnel Security Program Regulation, OPNAVINST 5510.1, Office of the Chief of Naval Operations, Washington, D.C., 29 April 1988.

Correspondence Manual, SECNAVINST 5216.5, Office of the Secretary of the Navy, Washington, D.C., 24 August 1984.

Naval Telecommunications Procedures, Telecommunications Users Manual, NTP 3, Commander, Naval Telecommunications Command, 4401 Massachusetts Ave., N.W. Washington, D.C., January 1990.

CHAPTER 7

MINE HANDLING AND STORAGE

Explosive devices, ranging from mines to initiating devices, are dangerous and designed for specific purposes. When explosive devices are manufactured, every effort is made to make sure they are as safe as possible when they are handled. But, even the least-sensitive explosives can detonate if subjected to careless or improper handling. Any negligence can result in equipment damage, personnel injuries, and/or loss of life. The history of accidents involving ammunition and explosives illustrates that avoidable circumstances existed in practically every incident where the cause could be determined. Complete understanding and strict observance of prescribed safety regulations are necessary to eliminate unsafe acts and conditions that can cause preventable accidents. Tasks performed repeatedly, no matter how dangerous, are likely to become routine and lead to carelessness. Therefore, constant alertness on the part of all personnel and intelligent, close supervision by supervisors are required to help prevent accidents. The most important areas to consider are handling and storage of ammunition and explosives.

All ammunition and explosives must be maintained in a high state of readiness at all times. In addition to proper preparation, assembly, and maintenance, ammunition and explosives must be handled and stored with extreme caution. Strict compliance with all prescribed safety standards, regulations, and procedures must be observed and enforced. Safety is always the first priority in any operation involving handling and storing ammunition, explosives, and other hazardous materials.

After completion of this chapter, you should be able to discuss and explain the requirements for handling and storing ammunition, explosives, and other hazardous material, and handling and storing inert materials. Additionally, you should be able to discuss and explain the supervision of safety and inspection programs, as well as magazine maintenance and safety of the work spaces of a MOMAG activity.

SAFETY

It is crucial that all personnel who handle, transport, or are involved in the storage of explosives and other hazardous material think, act, and live *safety* so that it becomes instinctive.

Accidents are usually the result of failure to follow regulations, failure to understand hazards, or failure to take necessary precautions. In each of these cases, failure indicates human error, carelessness, and/or poor judgment. Each person must realize that when he/she does not follow safety regulations, he/she not only endangers his/her own life but also puts fellow workers' lives in jeopardy. In the Navy, the responsibility for safety is an all-hands effort. This section addresses these responsibilities.

RESPONSIBILITIES

All personnel engaged in operations involving the storage of ammunition and explosives must be trained in all phases of the work they will perform. In addition, you must make them aware of the proper methods for performing tasks within their work area. Included in their training must be instruction in the following areas:

- Recognizing magazine identification markings

- Loading and unloading techniques within magazines and between magazines and conveyances

- Selecting and properly using materials-handling equipment

- Using protective equipment and protective clothing properly

- Operating fire-fighting equipment properly, knowing its availability and use, and knowing the procedures for reporting fires

faulty ammunition and explosives

- Identifying ammunition and explosives by container markings and color codings

- Recognizing special hazardous characteristics of current inservice as well as new items

- Knowing the proper handling procedures and storage arrangements for the ammunition and explosives

- Checking and observing placards or signs posted in the magazines

- Enforcing procedures for magazine security

Commanding Officer

The commanding officer is solely responsible for the safe handling, transportation, and storage of explosives at his activity. He must exert the same active, aggressive leadership in safety that he exerts in all aspects of his command. He must make sure that all personnel who perform or supervise explosive operations are qualified and certified to perform their jobs. It is also his responsibility to make sure that personnel from other agencies (civilian contractors, or other armed services) manage their activities in accordance with established safety rules. The commanding officer is never excused for the poor judgment, carelessness, and/or failure of his personnel to follow safety regulations.

Supervisors

Supervisors must be thoroughly familiar with the provisions of OP 5, *Ammunition and Explosives Ashore*, and other pertinent publications and directives concerning operations involving ammunition and explosives. As previously mentioned, safety is always the primary factor in any operation, especially an ordnance operation. You, as the supervisor must be constantly alert for, and eliminate, potential hazards that may exist in your work area.

As a supervisor, you have no authority to waive or alter safety regulations; nor may you permit violations of these regulations by other personnel. When the words *shall*, *must*, and *will* are used in conjunction with ordnance regulations or requirements, they mean **mandatory**. Only NAVSEASYSCOM or higher authority may grant a waiver of or exemption from an ordnance regulation or requirement. When the words *may* and *should* are used with ordnance regulations or requirements, they also mean mandatory unless an exemption is authorized by the commanding officer or officer in charge of the activity.

In accordance with OP 5, a supervisor involved with ammunition and explosives is responsible for complying with all regulations. To accomplish this requirement, you, the supervisor, must do the following:

- Explain to all personnel under your immediate supervision the standard safety regulations, industrial hygiene safeguards, and precautions that must be followed; and enforce the observance of all safety regulations by each employee. Furthermore, you must explain the characteristics of the ammunition, explosives, and other hazardous materials involved; the selection, use, and care of handling equipment—protective as well as process equipment; and the hazards of fire, explosion, and other catastrophes that the safety regulations and industrial hygiene requirements are intended to eliminate or reduce.

- Instruct and train each person under your immediate supervision in the tasks that they are to perform. Instructions may be given directly or through experienced operators until you are satisfied that the person is capable of performing the work safely. Instructions must include information concerning magazine location; identification; the location and use of shelters and bombproofs; first aid kits; fire-fighting apparatus; guards; personal protective equipment; showers; and neutralizing solutions.

- Make sure that all personnel are qualified and currently certified to perform the job assigned. You must report promptly to your immediate superior all personnel who, in your opinion, are not qualified to perform their assigned tasks. This includes any person engaged in operations involving the storage of ammunition and explosives who is suspected or known to be color blind.

- Investigate or assist in the investigation of all accidents involving operations, equipment, or personnel under your supervision and report or assist in the preparation of the report on the results of the investigation to higher authority for appropriate action.

- Identify all persons entering or approaching the work area under your responsibility and determine their authority to enter and/or remain in the area. You must exercise your authority to eject any person whose presence and/or actions, in your opinion, are detrimental to safety.

- Enforce orders relating to the maximum number of personnel permitted in the area. When the total number of persons including operators, supervisors, inspectors, and transients exceeds the number permitted in the magazine, magazine area, or work area, you are required to cease operations and inform the personnel not regularly employed in the area of the excess number. If such notice is not effective in reducing the number of persons to the number permitted, you must suspend operations and promptly notify the appropriate authority. You must cease operations when the amount of explosives exceeds the permissible quantity until such time that the excess amount is removed.

- Permit the use of only authorized tools and handling equipment for the operations in the manner prescribed by standard operating procedures. As the supervisor, you must require that tools and handling equipment be properly stored in designated locations when not in use. When a tool is lost or misplaced, you must stop operations until the tool is found or until you are satisfied that it cannot become the source of an additional hazard.

- Maintain cleanliness in the operational area, building, magazine, or magazine area. You must maintain all safeguards and prevent blocking of the safety exits, aisles, and accesses to fire-fighting equipment.

- Forbid major repairs or changes to any magazine, machinery, or equipment in magazines containing hazardous materials except in accordance with specific instructions from the commanding officer. As the supervisor, you must enforce safety standards in magazines under repair in your area.

- Make sure that all conditions in operating buildings, magazines, and magazine areas comply with orders relating to operation shutdown before leaving at the close of work. When an operation is not relieved by an oncoming shift, you must make certain that windows and doors are closed and properly locked and that all master power and light switches outside buildings and magazines are turned off. When an oncoming shift relieves an operation or a supervisor is relieved for any other reason, the off-going supervisor must make a complete report to the relief, of any situation that requires immediate attention or that should be kept under observation.

- Enforce observance of the safety regulations concerning personnel protective clothing and equipment. You must make sure that protective material such as goggles, gloves, gas masks, aprons, helmets, safety uniforms, safety shoes, and other implements, accessories, and appliances are inspected, maintained, and/or replaced as necessary.

- Be constantly alert for areas where lights, guards, or safety appliances are needed or repairs are required, and all areas where sprays, showers, shelters, or bombproofs should be accessible.

- Report, in writing, any requests, suggestions, or comments regarding safety standards to the CO or OIC.

- Alert your immediate supervisor of the need for EOD personnel to remove defective ammunition or materials from a work area.

Technicians

Operating personnel are responsible for understanding and strictly observing all safety standards, requirements, and precautions applicable to their work or duty. In accordance with OP 5, personnel involved in operations involving ammunition or explosives must comply with the following regulations:

- Wear or use approved protective clothing or equipment, when required.

- Warn other personnel whom they believe to be endangered by known hazards or by failure to observe safety precautions.

- Be prepared in the event of an unforeseen hazardous occurrence to give an audible warning to other personnel. In addition, exercise reasonable caution in the situation.

- Report to the supervisor any personal or personnel injuries or impaired health occurring during work or duty.

- Report to the supervisor any unauthorized personnel present in the area.

ACCIDENT INVESTIGATION AND REPORTING

Every year, the Navy experiences many accidents or incidents involving ammunition and explosives. There are always lessons to be learned from these that might help to prevent a reoccurrence. For this reason, it is required that all accidents or incidents involving non-nuclear explosive ordnance and material be reported using OPNAVINST 5102.1, *Mishap Investigating and Reporting*. This instruction will give you the proper format for your report. The investigation should be conducted to determine the **cause** of the accident, any **losses** as a result of the accident, and any **corrective measures** that may prevent any future reoccurrence of the accident.

GENERAL REGULATIONS

Throughout your Navy career, safety has always been an important part of the job to which you have been assigned. In any ordnance-related rating, safety becomes even more important in your daily activities. Since the number of regulations is too great to include in this chapter, only the general regulations will be discussed in this section. For detailed information, refer to NAVSEA OP 5, *Ammunition and Explosives Ashore Safety Regulations for Handling, Storing, Production, Renovation, and Shipping*, and NAVSEA OP 2165, volume 1, *Navy Transportation Safety Handbook for Ammunition, Explosives, and Related Hazardous Materials*.

PERSONNEL LIMITS

The maximum number of personnel permitted in a specific area during an operation or situation is known as the **personnel limit**. Supervisors are responsible for ensuring that established personnel limits are not exceeded. When such limits are exceeded, operations must cease immediately and the situation corrected.

Personnel limits must be kept at a minimum, but must allow work to be performed properly, safely, and efficiently. No one may be permitted

Commanding officers of ordnance activities determine personnel limits inside or in the vicinity of operating buildings, magazine areas, magazines, and other specified areas. Normally, the CO of the host command determines the personnel limits for MOMAG facilities. However, these limits may be established on the basis of recommendations by the MOMAG activity.

Some of the factors that must be considered in determining personnel limits are

- the type of building or area involved,
- the facilities and equipment available in the building or area,
- the degree of hazard present, and
- the number of persons (workers, supervisors, inspectors, observers, etc.) directly and indirectly involved in the operations.

Established personnel limits must be strictly enforced. This reduces the danger and extent of injury to personnel in case of an accident. In addition to personnel limits, the following requirements must be observed:

- Tasks that are not necessary in the accomplishment of a particular hazardous operation must be prohibited in the immediate vicinity of the hazard.
- Unnecessary and unauthorized personnel must be prohibited from the area.
- The layout of concurrent operations in a building or area must be subdivided into separate areas of operations or lesser operational hazards. These separate operations should be protected by substantial dividing walls, fire walls, operational shields, or other appropriate barricades.

A placard indicating the maximum number of personnel (workers and transients) permitted in an area must be conspicuously posted. Placards must be kept current and must be legible to persons approaching the vicinity. Some of the areas that require posted personnel limits are operating buildings, assembly rooms, electroexplosive devices (EEDs) test rooms, paint spray booths, and locker rooms. Storage magazines,

magazine areas, transfer points, and pier/wharf areas do not require posted personnel limits.

EXPLOSIVE LIMITS

The maximum amount of ammunition or explosives permitted in a specific area is known as the **explosive limit**. Explosive limits may be expressed as net weight of the explosives, number of items, or number of containers. The explosive limit of a building or magazine includes explosive items in vehicles or stored in the adjacent area outside the structure.

As the supervisor, you will be responsible for knowing and enforcing the explosive limits in your working areas. If the permissible limit is exceeded, all operations must cease immediately. Only after the excess explosive quantity is removed may routine operations continue.

The determination of explosive limits depends upon several factors. For magazines, the determining factors are the type of magazine and the hazards involved on the quantity-distance relationship. For an operating building, the operational procedures, transportation methods, hazards, building construction, facility layout, and the material's chemical and physical characteristics must be considered.

Unlike personnel limits, explosive limits must be conspicuously posted in all structures and areas where ammunition is stored or handled. Individual rooms, cubicles, and other confined areas of an operating building must have their respective limits posted. However, individual area limits may not exceed the overall limit established for the building and the adjacent area.

HOUSEKEEPING

Good housekeeping (cleanliness and orderliness) is necessary for maintaining effective accident and fire prevention programs. All buildings and adjacent areas must be kept clean and orderly at all times. This is especially important in areas involving ammunition, explosives, and other hazardous materials, because a potential danger is already present. As the supervisor, you will be responsible for ensuring that good housekeeping procedures are maintained constantly.

Smoking

Smoking is prohibited in any magazine, railcar, vehicle, or other conveyance that contains explosives, ammunition, or other hazardous material. Smoking is also prohibited where operations involving such material are in process. Smoking in vehicles that are passing through these areas of operations is not authorized. Designated smoking areas will be established by the commanding officer.

Aisles and Safety Exits

Aisles will be kept clear at all times in buildings that contain ammunition or explosives. Safety exits and the passageways outside of the exits will not be blocked. All doors and locks must be kept in good working order. Doors must not be fastened with anything other than anti-panic catches or quick-acting devices during hours when work is underway.

Accessibility of Safety Equipment

Access to safety equipment must not be blocked. Such safety equipment consists of fire protection equipment and systems, safety showers, thermometers, building and equipment electrical switches, first-aid-kit locations, and other similar safety equipment.

Tools and Handling Equipment

When not in use, tools must not be left on floors, platforms, scaffolds, stairs, ladders, ledges, rafters, or on the moving parts of machines or equipment. After use, tools must be collected and returned to the locations designated for their storage. Handling equipment must be neatly arranged and restowed when not in use.

Clothing Lockers

Clothing not worn during working hours must be kept in approved clothing lockers in designated locations only.

Floors

Floors must be kept clean and free of oil, grease, and other unsafe hazards and materials. Accumulations of combustible scrap and flammable residue are primary sources of fires. Working surfaces, processing lines, storage and repair areas, supply and support activities, and transfer and shipping areas must be kept clean and orderly. Operating areas and spaces between buildings must be kept clear of all combustible material and trash.

Electro-explosive devices (EEDs) such as squibs and similar items that are initiated electrically are very susceptible to initiation when exposed to radio frequency (RF) fields such as radio and radar transmissions. These **RF** fields are also known as electromagnetic radiation (EMR).

Electro-explosive devices can absorb the **EMR** waves into their firing circuit and cause heating of the bridge wire and primary explosive (refer to fig. 7-1). This heating and subsequent cooling can change the chemical properties of the explosive, either making it more sensitive or causing a breakdown of the material.

When handling, testing, or installing EEDs, you must make sure that all safety regulations are followed. NAVSEA OP 3565, volume 2, part 1, *Electromagnetic Radiation Hazards to Ordnance*, lists handling and loading requirements. Some of the major points to remember are as follows:

- Do not allow electrical contacts, electrodes, or pins to touch any object capable of conducting RF energy during handling or loading operations.

- Transport EEDs in a completely enclosed metal container whenever possible, and keep items packaged and stored in completely enclosed metal containers until immediately before use.

NOTE

A pallet is not considered a container. Therefore, metal pallets shall not be considered all-metal containers.

- Cover all open electrical connectors on EEDs with caps or shorting clips to prevent the pins from being touched.

- Remove caps or shorting clips just prior to installing the EDD and replace immediately when removed from the weapon.

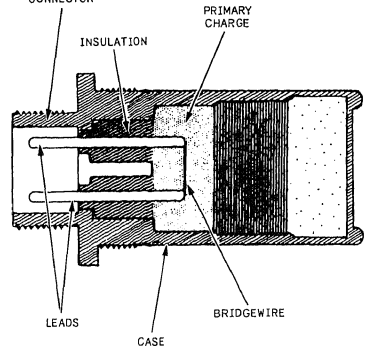


Figure 7-1.—Example of an EED.

- Do not expose internal wiring and firing circuits by assembling or disassembling ordnance in an RF environment.

FIRE PREVENTION AND CONTROL

In areas where explosives are stored or maintained, fires are extremely hazardous to life and property. Because explosives are very sensitive to heat and can react at temperatures lower than those that are required to ignite paper, wood, or fabrics, personnel involved in explosive operations must keep in mind that excessive heat must be prevented. In this section we will discuss fire prevention and control for mine shops and storage facilities.

FLAME-PRODUCING DEVICES

Flame-producing devices, such as matches and cigarette lighters, are not allowed in explosive areas. All personnel involved in storage, handling, and production are not allowed to carry matches or lighters on their person. You, as the supervisor, must strictly enforce this rule and take appropriate action in the event this regulation is violated.

MOTOR VEHICLES

A motor vehicle or any other piece of equipment with an internal combustion engine, used to transport ammunition or explosives must be equipped with a spark- and flame-arresting device in the exhaust system. The different types of material-handling equipment and their authorized use will be discussed later in this chapter.

REFUELING

Refueling gasoline- or diesel-powered materials-handling equipment is extremely hazardous when working with explosives or other hazardous materials. With this in mind, you should ensure that this equipment is fueled prior to any operations to keep refueling to a minimum. If you are involved in sustained operations and the MHE requires refueling, some of the major points you should remember when refueling are as follows:

- Never refuel inside a building.

- If the fuel supply is exhausted while in the building, tow the equipment outside for refueling.

- Refuel vehicles at a distance of at least 100 feet from the nearest explosives area and at least 20 feet from inert warehouses or buildings.

- Make sure that a continuous grounding path is maintained from the tank being filled to the tank being emptied. This will ensure that the entire system is electrically grounded.

- Make sure that the motors of both pieces of equipment are turned off unless the motor is required for pumping fuel.

- In the event of a fuel spill, the motors of both pieces of equipment will not be restarted until the fuel tank is capped and the spill is washed down with water or until the equipment is towed at least 50 feet from the spill.

NOTE

Never direct the contents of a CO_2 fire extinguisher at or into an open fuel tank. Static electricity can be generated by the high velocity of the discharged CO_2 and may ignite the fuel vapor, causing an explosion.

This list is not all inclusive. Refer to OP 5, volume 1, for all steps required to be followed during refueling procedures.

VEGETATION

Vegetation, including grass, leaves, undergrowth, and weeds, is a serious fire hazard to structures and facilities. It may be ignited by motor vehicles, by careless use of flame- or spark-producing devices, or by lightning.

Grass and/or brush will be kept to a height not to exceed 18 inches. Gasoline-powered grass cutters can be used on top of earth-covered magazines but will be kept at least 5 feet from ventilators and a safe distance from the magazine door (safe distances will normally be set by the host activities instructions). The remaining 5 feet should be cut by hand-powered equipment.

FIRE AND CHEMICAL HAZARD SYMBOLS

Fires that occur in explosive operations buildings and magazines pose various hazards to fire-fighting personnel. Some explosives detonate when exposed to heat or flames. Others may burn freely, produce poisonous fumes, or ignite when water is applied. In order to prevent a situation from becoming more hazardous than it might already be, understanding the fire and chemical hazard symbols associated with explosive or other hazardous material is necessary.

Fire Symbols

Fire symbols represent the four explosive divisions (1.1 through 1.4). They also designate those items that will be more hazardous to fire-fighting personnel and are the burning or explosive characteristics of the stored material. Each of the four symbols has a distinctive shape with the class division number shown in the

middle of the shape (fig. 7-2). As the hazard of the material decreases, the number will increase.

Chemical Hazard Symbols

Pyrotechnics and chemical agents can burn and produce extremely high temperatures and may give off toxic fumes. Special hazard symbols are used to identify operating buildings and storage facilities that contain these items in order to inform fire-fighting personnel of the types of hazards they may encounter. Figure 7-3 illustrates the chemical hazard symbols.

Fire-fighting Direction Symbol

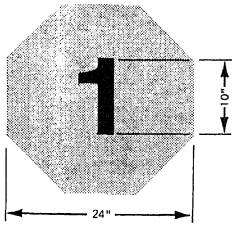
Where pyrotechnics are involved, there are times when the use of water can intensify the fire, the hazard of explosion, and/or spreading of the fire. The "apply no water" symbol (fig. 7-4) is intended to inform fire-fighting personnel of the danger involved in containing the fire.

POSTING OF SYMBOLS

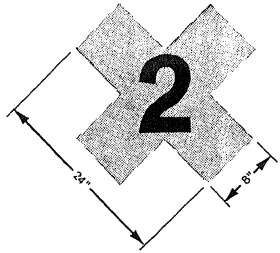
Fire and chemical hazard symbols should be posted on the outside of hazardous materials storage sites and operating buildings. The symbol should be posted so that it is visible from a minimum distance of 500 feet in daylight. If this is not possible, because of curves in approach roads, revetted areas, or vegetation, it should be placed on the roadway at a distance of not less than 500 feet. The displayed symbol should represent the most hazardous material present.

ELECTRICAL SAFEGUARDS

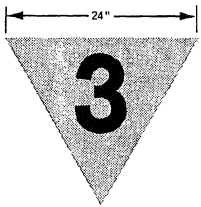
When personnel are working with explosives or other hazardous materials, consideration must be given to electrical safeguards. Primary, secondary, and static grounding systems are used to protect equipment and personnel from



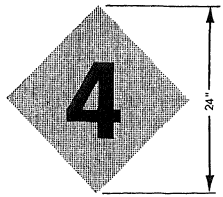
CLASS 1, DIVISION 1



CLASS 1, DIVISION 2

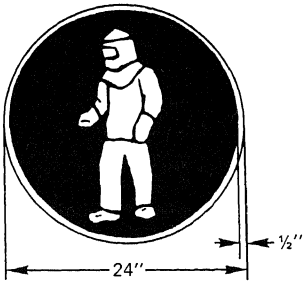


CLASS 1, DIVISION 3



CLASS 1, DIVISION 4

BACKGROUND: ORANGE

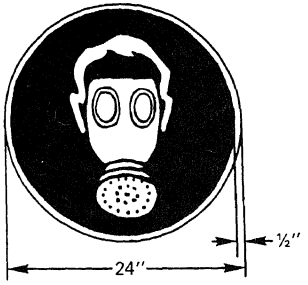


SYMBOL 1. WEAR FULL PROTECTIVE CLOTHING

BACKGROUND IS BLUE.

FIGURE AND RIM ARE:

RED FOR SET 1 PROTECTIVE CLOTHING
YELLOW FOR SET 2 PROTECTIVE CLOTHING
WHITE FOR SET 3 PROTECTIVE CLOTHING

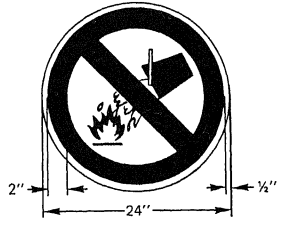


SYMBOL 2. WEAR BREATHING APPARATUS

BACKGROUND IS BLUE.

FIGURE AND RIM ARE WHITE.

Figure 7-3.—Chemical hazard symbols.



SYMBOL 3. APPLY NO WATER

BACKGROUND IS WHITE, CIRCLE AND DIAGONAL ARE RED, FIGURES ARE BLACK.

Figure 7-4.—Fire direction symbol.

accidental ignition or combustion. In this section we discuss the grounding requirements for a MOMAG activity.

POWER GROUNDS

The power ground system is used to keep hazardous electrical potentials from developing between equipment. The power ground will prevent electric shock to personnel and arcing between separate items, and it will protect equipment from overvoltage.

INSTRUMENTATION GROUNDS

The instrumentation ground system provides error free operation of sensitive electronic equipment. It is designed to minimize spurious signals from entering the equipment from electrical distribution systems, lighting, motors, and other instrumentation that might be in the area. This system is normally connected to the secondary ground girdle.

LIGHTNING GROUNDS

The lightning ground system is used to keep the entire activity at the same potential so as to prevent arcing between metal objects and to provide a low resistance path to ground for lightning strikes.

STATIC GROUNDS

Static ground systems eliminate electric discharges due to static buildup. They wi

generated. Segments of static ground systems are conductive floors, ground grab bars, and conductive table tops. A static ground system can be connected to water pipes or rods driven into the earth, but it must be inter-connected to the secondary ground girdle.

ORDNANCE GROUNDS

The purpose of an ordnance ground system is to make sure that electric current does not flow between ordnance components when they come in contact or are mated. The ordnance ground system must be electrically separated from other ground systems and must be connected to the secondary ground girdle at a single point. The use of an ordnance buss connected to a single point is acceptable when several weapons are connected to the ground. Ordnance ground busses, static ground busses, and electrical ground busses must be clearly marked to keep personnel from misidentifying them.

GROUND SYSTEMS INSPECTIONS

Ground systems should be inspected at least twice a year to make sure they are free from paint, corrosion, and other foreign material, which might interfere with their operation. The connections should also be checked to make sure they are secure.

GROUND SYSTEMS TEST

Ground systems should be checked at least every 14 months for electrical resistance and continuity. The results should be maintained on file.

QUANTITY-DISTANCE REQUIREMENTS

The relationship between the quantity of hazardous material allowed in an area and the separation (safety) distance between such areas is known as **quantity-distance** (Q-D). Quantity-distance requirements are designed to protect personnel from serious injury or death and all adjacent property from destruction by fires or explosions.

As a Mineman, you normally will not determine the quantity-distance requirements for an operating building or storage area. However you should be familiar with the basic Q-D requirements, and the principles and application of them.

BASIC Q-D PRINCIPLES

The principal considerations which form the basis for quantity-distance requirements are the amount and type of material involved, segregation of material, separation (safety) distance, and the material hazard classification. OP 5, volume 1, *Safety Regulations for Handling, Storing, Production, Renovation, and Shipping*, provides applicable quantity-distance tables.

Quantity of Material

The potential hazard area surrounding accumulations of explosives increases as the quantity of explosives increases. Therefore, it is desirable to minimize the quantities of explosives at any one location. Limits have been established in most cases for the maximum amount of explosives permitted in any one pile and in any one magazine, and the distances that such piles or magazines are to be separated. Whenever practicable, the specified distances should be exceeded to afford greater safety.

Type of Material

The potential dangers involved in the storage of ammunition and explosives are not measured solely by the quantity of explosives stored, but also by the kind of explosives. Ammunition and explosives used by the Navy are classified into certain broad subdivisions, or groups, for storage purposes. The materials within each group present the same general type of hazard and are therefore stored in the same general manner.

Segregation of Material

Some explosives are more hazardous than others, and some are potentially more hazardous when stored with others. Therefore, the segregation of certain types of ammunition and explosives is imperative. Magazines of different sizes and designs are used, depending on the characteristic of the material to be stored.

Separation Distance

The distance separating the location of one explosives location from another explosives

location, and from inhabited buildings or facilities, determines the permissible amount of explosives at any location. Separation distances are measured along a straight line from the outside of the nearest wall of the structure containing explosives, or the nearest wall of the controlling subdivision when the structure is subdivided. Subdivisions are used within a structure to prevent mass detonation of material within the structure.

Hazard Classification

The hazard classification system is based on a system established for international use by the United Nations Organization (UNO). The UNO system consists of nine classes of dangerous material. The nine classes and the types of hazardous materials involved are shown in table 7-1.

You will deal primarily with hazard-class-1 material. The ammunition and explosives hazard class 1 is further subdivided into five divisions. These divisions are based on the characteristics and predominance of the associated hazards and on the potential for causing personnel casualties or property damage. The divisions and the types of hazards expected are as follows:

1. Division Designator 1—Mass detonating
2. Division Designator 2—Nonmass detonating, fragment producing
3. Division Designator 3—Mass fire
4. Division Designator 4—Moderate fire, no blast
5. Very insensitive

STORAGE COMPATIBILITY

The separation of DOD hazard class 1 materials into several divisions does not necessarily mean that all items associated with a specific division can be stored together. Some material may appear in more than one division, depending upon the degree of confinement or separation,

Table 7-1.—United Nations Organization Hazard Classification System

CLASS	TYPE OF HAZARDOUS MATERIAL
1	Ammunition and explosives, DOT Classes A, B and C; Blasting Agents
2*	Compressed gasses, flammable and nonflammable, Poison gasses (Poison A)
3	Flammable liquids
4	Flammable solids or substances
5	Oxidizing materials
6*	Poisonous substances (Poison B); Irritating materials; Etiological agents
7	Radioactive materials
8	Corrosive materials
9	Miscellaneous dangerous substances (Other regulated materials)

*Includes ammunition without explosive components which contain toxic chemical agents, and containers of toxic chemical agents in bulk. Formerly Q-D class 8.

type of packaging, storage configuration, state of assembly, or any combination of these.

Storage Compatibility Groups

All ammunition and explosives must be stored according to assigned storage compatibility groups (SCG). Materials assigned to an SCG can be stored together without significantly increasing the probability of an accident or, for a given quantity, the magnitude of the effects of such an accident. Ammunition and explosives will be assigned to 1 of 12 compatibility groups. Mines and their explosive-loaded components will fall into six of these groups. Table 7-2 shows the storage compatibility groups of ammunition and explosives. Mixtures of these groups, except groups A, K, and L, are authorized by NAVSEASYSCOM. When these groups are mixed, the net explosive weight will not exceed 1,000 pounds. The hazard classification assigned will be that of the highest hazard class in the mixed stow.

Storage Compatibility Tables

OP 5, volume 2, *Ammunition and Explosives Ashore Storage Data*, provides storage compatibility tables for ammunition and explosives. There are separate tables for each type of ammunition. Table 7-3 illustrates a portion of

Table 7-2.—Storage Compatibility Mixture Chart

GROUPS	A	B	C	D	E	F	G	H	J	K	L	S
A	X	Z										
B	Z	X	Z	Z	Z	Z	Z					X
C		Z	X	X	X	Z	Z					X
D		Z	X	X	X	Z	Z					X
E		Z	X	X	X	Z	Z					X
F		Z	Z	Z	Z	X	Z					X
G		Z	Z	Z	Z	Z	X					X
H								X				X
J									X			X
K										Z		
L												
S		X	X	X	X	X	X	X	X			X

1. The marking "X" at an intersection of the above chart indicates that these groups may be combined in storage. Otherwise, mixing is either prohibited or restricted per note 2 below.
2. The marking "Z" at an intersection of the above chart indicates that, when warranted by operational considerations or magazine nonavailability, and when safety is not sacrificed, logical mixed storage of limited quantities of some items of different groups may be approved by NAVSEASYSCOM. Approval is not to be considered a waiver.

ITEM	DODIC (NALC) NSN	EXPLOSIVE		QD CL	COMP GP
		WT/LBS	TYPE		
ACTUATOR, Expl, Elec, EX 28 Mod 0, f/Mine Mk 65	KW96	0.0226	Barium Styph	1.4	B
ACTUATOR, Expl, Mk 18 Mod 0, NS, f/Non-Service Mines Mks 25, 36, 52, 55, 56	RW77	0.0051		1.2	B
ACTUATOR, Expl, Mk 18 Mods 0, 1, f/Control Unit Mk 112	UW76, XW47	0.0053	Primer + Pyro	1.2	B
ACTUATOR, Expl, Mk 26 Mod 0, f/Mine Mk 60 Mod 0	EW38	0.0112		1.4	B
ANCHOR, Mk 6 Mod 5, f/Mine Mk 56	R011	N/A	Inert	N/A	N/A
ANCHOR, Underwater Mine, Mk 60 Mods 0, 1	EW81, R041	0.0343		1.4	S
ARMING DEVICE, Mk 2 Mod 7, f/Mine Neutralization System AN/SLQ-48	R780			1.1	D
ARMING DEVICE, Mk 5 Mod 1, HE Ldd	R701, R715	0.0502	Tetryl	1.1	D
ARMING DEVICE, Mk 10 Mod 0, Mk 11 Mod 0, HE Ldd	R702, R703, R713, R716, R717	0.0591	Tetryl	1.1	D
ARMING DEVICE, Mk 30 All Mods, f/Dstr Mod Kit Mk 75	UW92	0.0003	Ld Azd + Tetryl	1.1	D
ARMING DEVICE, Mk 32 Mod 1, f/Dstr Mod Kit Mk 75	RW15	0.0014	Ld Azd + Tetryl	1.4	B
BOOSTER, Mk 18 Mods 1, 2, f/Mines Mk 52, 55	R704, R709	1.4560	Comp B	1.1	D
BOOSTER, Mk 59 Mod 0, Expl Ldd, f/Destr, Mks 36, 40	UW93	0.6451	Tetryl	1.1	D
MINE, U/W, Mk 60 Mod 0, OA-01, -02	U961, U962	96.04	HE	1.1	D
MINE, U/W, Mk 60 Mod 0, Shipping Configuration	U963	0.0024	HE	1.4	S

Table 7-3.—Storage Compatibility Table—Continued

ITEM	DODIC (NALC) NSN	EXPLOSIVE		QD CL	COMP GP
		WT/LBS	TYPE		
MINE, U/W, Mk 65 Mod 0, OA-01, HE Ldd	U964		PBXN-103	1.1	D
MINE, U/W, Mk 67 Mod 2, All-Up Configuration w/Whd Section	UM89, UM90	530.00	HE	1.1	D
PARACHUTE CONTROL UNIT, Mk 66 Mod 0, f/Mk 25, 36, 53 NS and Dummy Mines	1350-00-038-7456, R283, R286, R288	0.00005		1.4	S
PISTON, Expl Ldd, f/Mine Mk 57	UJ98, CW99	0.00001	Prop	1.4	C
PRIMER, Elec, Mk 18 Mod 1, f/Release Pistols Mks 2, 3, 4	1351-00-038-7509	0.0045	Blk Pdr	1.2	B
PRIMER, Elec, Mk 159 Mod 0	R805	0.0013	Ld Azd	1.1	B
PROPELLANT ASSEMBLY, Expl, f/Mine Mk 56	AW66, RW24, UF80	7.00	Prop	1.3	C
MINE, U/W, Mk 52 All Mods, All OA's, Configurations C and D	For complete listing of NALCs for the Mks 52 & 55 refer to NAVSEA TW010-AA-ORD-010	598.00	HE	1.1	D
MINE, U/W, Mk 55 All Mods, Service, All OA's, Configurations A and B		1292.00	HE	1.1	D
MINE, U/W, Mk 55 All Mods, Service, All OA's, Configurations C and D		1291.50	HE	1.1	D
MINE, U/W, Mk 56 Mod 0, All OA's, Configurations A and B	UM67, UM68, UM69, UM70, UM71, UM72, U946, U950, U951	355.1610, 357.10	HE	1.1	D
MINE, U/W, Mk 56 Mod 0, Service, All OA's, Configuration C	UM73, UM74, U952	357.10, 355.1610	HE	1.1	D

type of table lists for each mine or mine component the DODIC/NALC, explosive weight, type of explosive, and storage compatibility group.

The explosive weights listed in OP 5, volume 2 may differ from those listed in OP 2165, *Navy Transportation Safety Handbook for Hazardous Materials*. The listings in OP 5 only indicate the weight of the most significant explosive element from a storage standpoint. The listings in OP 2165 indicate the totals of all explosives in each item of ordnance material given.

EXEMPTIONS AND WAIVERS

Exemptions and waivers are written authorizations that allow specific deviations from mandatory requirements. The difference between the two is the time period for which the deviation is granted. Normally, an exemption is granted for a period of 5 years or less, whereas a waiver is granted for a period of 2 years or less. If justified by operational necessity, COMNAVSEASYSCOM may grant temporary waivers for a period of 30 days or less.

The procedures for requesting exemptions and waivers concerning ammunition and explosive requirements are contained in OPNAVINST 8023.20, *Waivers and Exemptions of Explosive Safety Requirements*. All such requests are submitted to OPNAV, via the chain of command and COMNAVSEASYSCOM.

Activities granted exemptions and waivers must periodically review the necessity for the deviations. Existing exemptions and waivers must be revalidated every 5 and 2 years, respectively, in accordance with OPNAVINST 8023.20 and OP 5, volume 1. If an existing exemption or waiver is no longer required, OPNAV must be informed so the exemption or waiver can be canceled.

HANDLING

Accidents that occur during handling of hazardous material can cause destruction of essential material, injuries, and sometimes death. Many accidents are caused by lack of knowledge, not using the proper equipment for the job, and careless operations. As the supervisor, you must make sure that all personnel involved in handling ammunition and explosives have a thorough understanding of the operation and of the hazards involved in the use of the equipment. This section will discuss the types of equipment, safety handling equipment.

INDUSTRIAL MATERIALS HANDLING EQUIPMENT (MHE)

You can use only approved equipment in operations that involve weapons, ammunition, and explosives. Equipment that has been modified or designed by your activity cannot be used without approval from NAVSEASYSCOM. The equipment you will use, such as forklifts and pallet trucks, will be classified based on its intended use. The types are as follows:

- Type D—Diesel-powered with the minimum acceptable safeguards against fire hazards.

- Type DS—Diesel-powered with additional safeguards added to the exhaust, fuel, and electrical systems.

- Type E—Electrically powered with the minimum acceptable safeguards against igniting fire or explosion.

- Type EE—Electrically powered, has all the safeguards of the type E with all the electrical equipment completely enclosed, including the motor. This type is usually referred to as *spark enclosed.*

- Type EX Class I—Electrically powered, assembled in such a way that it may be used in certain areas that contain flammable vapors. Usually referred to as *explosion proof.*

- Type EX Class II—Electrically powered, assembled in such a manner that it can be used in areas containing combustible dust. Usually referred to as *ignition proof.*

- Type G—Gas-powered, minimum acceptable safeguards against igniting fire or explosion.

- Type GS—Gasoline powered, additional safeguards to exhaust, fuel, and electrical systems.

- Type H—Hand-powered.

- Type HS—Hand-powered, electrically conductive nonsparking wheels, or ground strap.

Always select the proper equipment for the operation. Generally, the EE- and EX-type equipment are used in operations that involve handling ammunition and explosives inside buildings. The DS and GS types are normally used in open areas or areas with adequate forced ventilation.

Marking

Materials handling equipment that is used for handling ammunition and explosives will be painted solid yellow and marked for identification. The markings will consist of the designation (EE, EX, DS, GS, and so forth) in 4 inch black block letters on both sides and the rear of the equipment. In addition, explosion-proof vehicles will have a six inch wide blue diagonal stripe at a 45 degree angle on both sides and the rear of the vehicle. The safe working load and the gross weight of the vehicle will be printed so as to be in full view of the operator at all times.

Operator Safety

Personnel who operate material-handling equipment must observe the safety precautions listed below:

- Check the condition of the MHE prior to starting, periodically during its use, and after the equipment is secured for the day.

- Only Qualified personnel who are properly trained and licensed will operate MHE.

- When the engine is shut off, set the brake, and lower the forks to the deck when leaving the equipment unattended.

- Do not allow anyone to stand or walk under any elevated portion of the equipment.

- Keep arms and legs inside the running lines of the equipment.

- Do not put arms or legs between the uprights of the mast.

- Do not use MHE for opening or closing doors.

- Do not remove overhead guards without permission of the safety officer.

- Always make sure the load is balanced, secured, and does not exceed the capacity of the

NOTE

This is not a complete listing of safety regulations. Make sure you are familiar with the contents of OP 5, volume 1 and NAVSEA OP 4098, *Handling Ammunition, Explosives, and Hazardous Materials with Industrial Materials Handling Equipment (MHE).*

HOISTING EQUIPMENT

Hoisting equipment that is used in handling ammunition and explosives includes cranes, hoists, lifts, slings, bands, carriers, beams, and strongbacks. As the supervisor, you must make sure that you select the proper equipment for the operation, that the equipment has been inspected, that it has been weight tested, and that the safe working load of the equipment will not be exceeded.

Inspection

Inspection of the equipment used for lifting ammunition and explosives is necessary for safe and efficient operation. The following is a partial list of inspection criteria:

- Nonmetallic slings and lifting devices will be inspected immediately before use, frequently during use, and after use for wear, frayed threads, broken stitches, mildew, and dry rot.

- Metal carriers, beams, and bands will be inspected for distortion, fractures, wear, corrosion, cracked welds, and missing parts.

- Wire rope will be inspected for kinks, sharp bends, crushing, corrosion or pitting, and broken wires.

Testing

Metallic and nonmetallic lifting equipment must be tested once each year on shore stations and once every 4 or 5 years when used onboard ships. The following is a partial list of the testing criteria:

- Slings, bands, beams, strongbacks, and so forth must be static tested at 200 percent of their safe working load. The duration of the test will be 2 minutes for metallic items and 5 minutes for

● Nonmetallic slings will be tested at twice their safe working load in the configuration in which they will be used.

NOTE

Should doubt arise about the serviceability of any equipment, the equipment should be removed from service and subjected to testing for verification.

Marking Tested Equipment

Once the equipment has been tested, it must be marked by the activity that performed the test, and a record of each test must be maintained by the activity. The marking shall include, as a minimum, the name of the testing activity, the date tested (month and year), and the safe working load. If desired, the date of the next required test may also be included. The method of marking the equipment is subject to the following:

● Marking should be on a conspicuous surface in contrasting colored paint. The surface should not be subjected to rubbing or dragging that might deface the marking.

● If space for marking is limited, an inspection tag should be attached to the equipment. The required information should be etched, stamped, or engraved on the tag, with the letters or numbers filled with black filler.

● Color coding may be used in addition to but not in place of the above methods.

STORAGE

The proper storage of explosives and ammunition is essential in maintaining explosives and ammunition in a ready-for-issue condition. Magazines and inert storage facilities must be inspected and maintained to make sure they are safe, clean, and afford the protection necessary to the assets kept by your activity. This section will discuss the storage regulations for ordnance and inert material.

MAGAZINE REGULATIONS

Ammunition and explosives must be stored only in magazines or other approved areas designed, designated, and isolated for the particular material. The type and amount of material stored in a magazine or an area are dependent upon Q-D and compatibility requirements.

All permanent magazine assignments must be approved by NAVSEASYSCOM. Occasionally, under emergency situations, it may be necessary to temporarily store ammunition or explosives in a structure not constructed as a magazine. Under these situations, the structure should, in all respects, provide adequate protection for the contents and the adjacent area. The structure must also provide adequate protection against moisture and dampness, have adequate ventilation, comply with Q-D requirements, and be equipped with approved lightning protection if required. All applicable conditions of magazine storage and security requirements commensurate with the contents of the magazine must be met. Additional information on temporary storage procedures will be discussed later in this chapter.

MAGAZINE OPERATIONS

Operations involving ammunition and explosives in the magazines and magazine areas are limited to specific types of work. There are **permitted** and **forbidden** operations. You, as the supervisor, must be thoroughly familiar with the operation and the type of work you can perform in the magazine before you start the job. The paragraphs listed below have been excerpted from OP 5, volume 1. They are not all inclusive.

Permitted Operations

The following operations are permitted in and around magazines:

● Palletizing, for storage or shipment. Not more that four people and two pallet loads can be involved.

● Opening containerized units for visual inspection without removing items from containers.

● Replacing damaged or loose strapping on boxed ammunition.

● Removing bomb nose and tail plugs by hand for visual inspection of cavities and liners.

● Minor removal of rust and corrosion, touching up paint and stenciling non-mass-detonating items, but only on the loading dock, empty railcars, or motor vehicles outside magazines and away from magazine doors.

Forbidden Operations

The following operations **are forbidden** inside magazines:

● Fuzing or unfuzing operations

● Boostering or deboostering bombs

● Soldering or other heat-producing operations

● Painting, repainting, stenciling, or restenciling

● Performing electrical checks or tests on weapons.

MAGAZINE EXITS

At least one door must be open when one or more people are working in a magazine. The exit route must not be blocked. Magazines with self-closing latches will be secured so that they will not swing shut and trap people inside.

MOTOR VEHICLES AND RAILCARS

When motor vehicles or railcars are used to transport explosives or ammunition to and from the magazines, they will be unloaded as quickly as it is practicable.

RED FLAG

A red (Bravo) flag will be prominently displayed at the entrance to each magazine area where there are personnel working. At the discretion of the commanding officer, a Bravo flag will be displayed at each of the magazines where work is being performed.

OPERATING AND ASSEMBLY BUILDINGS

Hazardous materials should not be allowed to accumulate within an operating or assembly building except for the minimum quantities necessary to maintain operations. However, ammunition and explosives may be stored overnight in an operating or assembly building provided the following requirements are observed:

1. The material must be part of the work or operations in process within the building.
2. The explosive limits may not be exceeded.
3. The compatibility requirements must be observed.
4. The building must be equipped with an automatic sprinkler system. However, a waiver to this requirement may be obtained from OPNAV
5. The building must be specifically included in the security patrol's schedule.
6. The fire department must be made aware of the building's contents.
7. A red flag must be displayed to indicate the presence of ammunition or explosives.

MAGAZINE INSPECTIONS

Supervisors must make frequent inspections of magazines, magazine areas, and operating practices. They must be constantly alert for and correct any hazardous conditions in their areas. The CO or OIC must schedule periodic zone and/or area inspections of the magazines and magazine areas to ensure that prescribed safety standards are being maintained. In addition, the CO or OIC will appoint a representative to conduct separate inspections on a regular basis.

Magazines, including ready service lockers, must be inspected for the following reasons:

● To determine if magazine repairs are required

● To ensure that safety regulations are posted and are observed

● To ensure that magazine contents are stored properly and are not deteriorating

GENERAL REQUIREMENTS

General magazine inspections must include areas related to security, cleanliness, safety, atmosphere, identification of contents, and posting. A checklist covering all safety regulations and requirements regarding magazine operations should be used when conducting magazine inspections. This will ensure that no violations or hazards are overlooked. The checklist should also contain a full description of any condition

determined to be unsatisfactory and/or in violation of safety requirements. The checklist, when used, should be properly authenticated and made a part of the magazine inspection log.

SECURITY.—Security conditions require magazines and magazine areas to be guarded and magazine doors secured against unauthorized entry. In addition, the magazines must be inspected regularly for evidence of tampering, forced entry, or attempted sabotage.

CLEANLINESS.—Magazine interiors must be clean and free of accumulations of dust, dirt, gravel, rodents, foreign matter, stains caused by exuding explosives, and any unnecessary combustible material.

SAFETY.—Safety conditions require that first aid and fire-fighting equipment be properly located and in operating condition. Firebreaks must be properly maintained and free of combustible material and obstructions. Compatibility requirements and explosive limits must be observed. Material must be neatly stacked on dunnage and not be in excess of the permitted height. Outer boxes and containers must be in good physical condition, closed securely, and show no evidence of leakage. Normal safety conditions also require that loose miscellaneous ammunition, paints, oils, waste, or any other unauthorized materials not be present. Wire screens in ventilator ducts, louvers, door vents, and drains must be intact. Grounding connections to the dunnage within the stowage piles must be in place, if required. Magazines must be in good condition, the earth cover intact and not eroded, and no major cracks in the walls or floor.

ATMOSPHERE.—Magazines must be kept dry, properly ventilated, and free of any abnormal odor. Thermometers, if installed, must be intact and operating. Interior temperatures must not be excessive. Readings should be taken as required.

IDENTIFICATION OF CONTENTS.—Magazine contents must be properly identified and segregated. The contents must be properly placarded and the proper fire and chemical hazard symbols must be displayed as required.

POSTING.—The inside front wall or front door of a magazine must be properly placarded with safety rules, precautions, explosive limit, and handling of the ammunition or explosives contained in the magazine.

Special Requirements

In addition to the general inspection requirements, most ammunition and explosives require their own specific considerations. In conducting inspections of magazines, specific kinds of ammunition and explosives must be inspected in accordance with OP 5, volume 1.

Frequency of Inspections

The commanding officer, or his authorized representative, will determine the frequency of magazine inspections. The frequency of inspections may vary, depending on the following situations:

- Number of magazines to be inspected
- Weather conditions
- Season of the year
- Security requirements
- The number that require special attention

Magazine Area Inspection Requirements

Magazine area inspections are designed to ensure that

1. firebreaks are being maintained,
2. applicable fire protection equipment is available and operable, and
3. roads are in good usable condition.

Magazine area inspections may be required more often than magazine inspections, especially during seasons in which grass or brush fires are most likely to occur.

Inspections must be made during daylight hours to ensure that any existing substandard conditions are detected. Exceptions to this requirement are security inspections that must be made during both day and night hours.

Inspection Reports

The date and hour of each inspection must be recorded in the magazine inspection log over the signature of the person making the inspection.

reported promptly to the individual in charge for correction of the conditions noted in the log. Conditions that are satisfactory must be noted in the log by the entry "normal." Magazine inspection logs may be destroyed 1 year from the date of the last entry.

Open Storage

Open storage sites are considered undesirable and may be used only with approval of NAVEASYSCOM. Even when they are determined to be necessary, they are to be considered temporary storage areas. The current regulations concerning uantity-distance, identification, inspections, and security of above-ground magazines will apply to open storage.

Temporary Storage

All ammunition and explosives must be stored in magazines or ready-service lockers. However, situations may arise where it may be necessary to temporarily store ammunition and explosives elsewhere. Motor vehicles and railcars should be moved to a holding yard, where they will be considered above-ground magazines. The current regulations will apply as stated in the previous paragraph.

Inert Storage

Inert ammunition components are the essential materials which, when assembled together and installed, comprise finished rounds. The proper functioning and, to a large extent, the safety in storage and use of ammunition are dependent upon the condition and suitability of the respective ammunition components. Therefore, these components should receive the same care and attention during handling and storage as that given to service or line ammunition.

The information contained in this section briefly covers some of the requirements and procedures for storage of inert material. Additional information is contained in OP 5; OP 4118; OP 4410; NAVSUPINST 4450.21, *Storage and Warehousing Facilities and Services*; MIL-STD 129, *Marking for Shipment and Storage*; and other applicable publications and directives.

INERT STORAGE GENERAL REQUIREMENTS

Inert materials and components must not be stored with ammunition, explosives, or other hazardous materials. In foreign or forward areas considered vulnerable to surprise attacks, inert components may be stored in blastproof magazines with their related explosive components. However, this procedure must be approved by the area commander.

All boxed and unboxed items must be stored to facilitate withdrawal for reconditioning, inspection, issue, shipment, and inventory. In addition, these items must be stored securely against theft or pilferage and protected from the deteriorating effects of light, moisture, heat, fungus, rodents, and insects. These items must also be protected from physical damage to containers, which in time may result in unstable storages. Different items or types of stock should be segregated in such a manner as to facilitate taking inventories and to avoid confusion as to quantities, types, and lots.

Most mine assembly-level items are susceptible to damage and warrant careful handling and storage at all times. Items that are removed from protective packing for class B criteria must be repacked in an equally protective manner before being returned to onsite storage. If the original packing material cannot be reused, refer to OP 4118 for proper packing procedures of mine items.

LOADING AND TRANSPORTATION

As a supervisor, you will find yourself involved in the movement of weapons and initiating devices from the magazines to the assembly building, and at times, the shipment of ET mines to other facilities for MINEX operations. This section will discuss some of the precautions and regulations pertaining to loading and transporting ordnance and other hazardous materials. There are numerous publications and instructions that must be strictly observed. You will find a list of these instructions in OP 5, volume 1 chapter 10.

LOADING REGULATIONS

During loading operations, safety is paramount. Precautions must be taken to make sure that loading operations are conducted safely when handling hazardous materials. The following

unloading operations:

- Handle only stable loads.

- Make sure the load is safely arranged and secured.

- Do not load trucks beyond their rated capacity.

- Have an observer present when handling long items.

- Place the load so as not to obstruct your view.

- If a weapon is dropped, it should be segregated and disposition requested.

Once the load is in place, it should be blocked and braced to keep it from shifting while in transit. Refer to the proper military standards for loading procedures.

PREPARATION FOR SHIPMENT

Before any hazardous shipment can be loaded or transported, it must meet certain requirements of packaging, marking, and labeling, and have the proper documents required for movement. This section will address these requirements.

Packing

Hazardous material must be packed according to the applicable specifications and drawings. Packaging information can be found in OP 2165, volume 2.

Hazardous material that has different hazard classifications will not be packed in the same container unless authorized by COMNAVSEA-SYSCOM. If it necessary to pack articles of different hazard classifications in the same container, the container will be assigned the highest hazard classification of the material that is packed together.

Marking

Regulations require that all hazardous material containers be marked conspicuously and that the equipment used to transport such shipments be properly placarded. The shipping activity is responsible for marking all containers. The requirements of MIL-STD-129, *Military Standard, Marking for Shipment and Storage.*

Inspection Prior to Release

Before a shipment can be released, all containers or pallet loads must be visually inspected to make sure that they have the proper hazard classification and other appropriate markings.

MOTOR VEHICLE TRANSPORTATION

Department of Transportation (DOT) regulations apply to all motor vehicle transportation of hazardous material. You, as the supervisor, must be familiar with the DOT regulations that will apply to any movements you will be involved with at your command as well as all regulations and instructions of the Department of the Navy. Motor vehicles that transport hazardous material require that the following precautions be followed:

- Vehicles will be operated with the same safety restrictions that apply to all motor vehicles with internal combustion engines.

- Exhaust systems will be equipped with an effective spark-and flame-arresting device in the exhaust line. A standard exhaust system maintained in good condition will be sufficient.

- Motor vehicles will be inspected upon initial receipt and every 6,000 miles to make sure they are performing properly.

- A vehicle will be returned for corrective maintenance if the engine is running rough (missing).

- A vehicle will be properly placarded before movement of the hazardous material.

When the movement of the material is completed, and the vehicle will not be used for further movements, you should make sure that all dunnage, debris, and placards are removed from the vehicle.

Routine Vehicle Inspection

Motor vehicles owned by the Navy and used for transportation of hazardous material will be inspected at frequent, regular intervals by a

competent person to make sure they are in good mechanical condition and in good working order. Daily vehicle inspections will be made to determine the following:

- Fire extinguishers are filled, sealed, and in good working order.

- Electrical wiring is in good condition and properly attached.

- Fuel tank and piping are secure and not leaking.

- Brakes, steering, lights, horn, and other equipment are operable and in good condition.

The use of DD Form 626, *Motor Vehicle Inspection Form*, should be used for the daily inspections.

Explosives Drivers

Personnel who are involved in transporting hazardous materials must meet certain qualifications to be certified as an explosives driver. These qualifications are as follows:

- The driver must have a valid state driver's license. It need not necessarily have been issued by the state where his/her activity is located.

- The driver must have an annual physical examination and have a medical examiner's certificate.

- The driver must have an explosive driver identification card (Standard Form 46), which must be noted with "Explosive Driver"

- The operator must be at least 18 years of age for on-station moves, and 21 years of age for off-station movement.

In addition to the those requirements, personnel must receive at least 12 hours of instruction and training in driving trucks and tractors, handling and transporting hazardous material, and properly using fire extinguishers.

SUMMARY

In this chapter, we have discussed ordnance storage facility operations which include safety regulations; responsibilities; fire prevention and control; electrical safeguards; and handling equipment and procedures as they apply to handling, storage, and transporting hazardous materials. This is just the basic information, and further study of the listed reference material is required for you to be able to do your job well.

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